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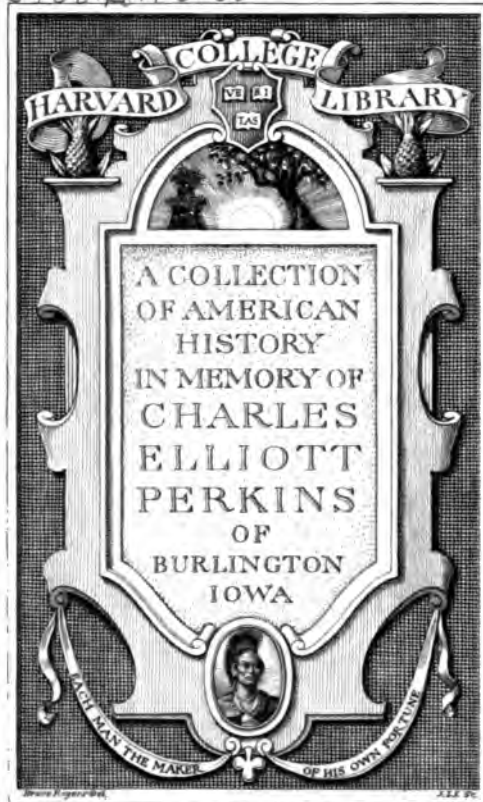
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UPPER TWIN LAKE.

Life in the Wilds of America,
—AND—
WONDERS OF THE WEST

IN AND BEYOND

THE BOUNDS OF CIVILIZATION.



ILLUSTRATED.

To the West, to the West, to the land of the free,
Where the mighty Missouri rolls down to the sea,—
Where a man is a man if he's willing to toil,
And the humblest may gather the fruits of the soil;

BY I. WINSLOW AYER, A. M., M. D.

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PREFACE.

WITH the map of our country spread out before us, with all the minutiae of the best geographers, with the intricate tracery of net-work, marking the lines of railway that radiate from large cities and extend to others that have attained rank and celebrity—to villages that are destined to become great cities in the promising future, it seems easy enough to explore the extensive area of millions of acres we proudly call our own; but with all the facilities of travel, and the many tempting inducements to avail ourselves of them, there are but few comparatively, who acquire a thorough knowledge of the country by personal exploration.

We visit the Old World, climb the Alps and the Pyrenees, delight in the rose-gardens of France, dream under the soft skies of Italy, wander in orange-groves and amid the clustering vines of Mediterranean Isles, discourse of charming Lake Como, of the beauty of the Rhine and of other natural features of the continent from the Irish Channel to the Bay of Naples, enraptured with views that become heart pictures, to which memory oft fondly turns to gaze upon, with ever fresh delight, and we return to the land of our birth the

wiser for the tour; but strange enough, we live the years of our allotment, acquiring less practical knowledge of our native land, than that attained by sight-seeing Europeans who visit our shores.

America has every variety of scenery, even the most picturesque and gorgeous—the verdure and bloom and fruits of luxuriant Nature in her holiday attire; her towering mountains, with their snowy crests above the fleecy clouds, and base adorned with flowers; her beautiful rivers, from silver cords winding among the wood-crowned hills, to mighty waters rising in the far away north, and flowing swiftly onward to the southern gulf; her vast lakes with countless laden barks whose snowy sails are gladdened by the breeze, or fast plying steamers bearing the commerce of the country and the world; her billowy prairies extending from horizon to horizon, of rank luxuriant verdure and beauteous flowers; her golden wheat-fields, whose area is bounded by the scope of vision; her majestic forests, whose giant arms have welcomed and waved adieus to passing centuries; her silvery cascades, that leap from dizzy heights and send back their rainbow tints to heaven; her labyrinthine caverns, those mysteries of nature unexplored by man; ravines and canons with frowning rocks thousands of feet above on either side; precipitous, jutting cliffs upon whose shelving edge the mountain goat seeks safety from pursuit, and the eagle rests from weary flight, primeval and stupendous work of Nature, fit court and workshop of the gods; America's vale of Cashmere, where flows the Yellowstone; geysers, crystal lakelets and orange groves; mystic mounds and

rock houses of a race whose very name can only be conjectured—the ever varied scenery so grand, so beautiful, all invite the student of nature.

Glancing again for the hundredth time, perhaps, at the pencilings made while visiting the regions of the “Far West”—regions of mystery, but which the enterprise of my countrymen is fast bringing into direct relations with our homes—far off lands from which letters come, and to which letters go, lands over which the glorious old flag proudly waves, I find many facts and thoughts suggested by them which may interest many readers, and avoiding the details of a continuous tour which might weary the general reader, I present scenes and records of events which it is hoped will afford entertainment and information, and so repay the perusal.

The many and wonderful changes, incident to progress, which have occurred within the last decade in the States and Territories west of the Mississippi, the many cities, towns and villages, which have risen from mountain and plain, by sea-side and river, the public enterprises affecting the welfare of men, which have been inaugurated in these growing and prosperous communities, the brilliant achievements of genius, skill, perseverance and industry, that have gone forth to benefit humanity; are all eras of history, to which Americans turn with eminent satisfaction and warrantable pride.

The publications, concerning the great West, written but a few years ago, are now only valuable and interesting as records of the past; they utterly fail to impart information desired concerning the present condition of the country, however reliable

the records, however exhaustive in detail, however observing the tourist, and however just the judgments expressed; these records were of communities and regions, of governments, of enterprises accomplished and in contemplation *then*, but are in no sense mirrors of the present time. In relation to very many subjects and truths of vital interest and importance to the people, they are necessarily silent, for the knowledge was then veiled in the unknown future. In the preparation of this work, I have aimed to present facts only, and to speak of conditions existing to-day,—in fine to delineate scenes witnessed, and report the varied information attained in an extended tour of observation.

For many interesting facts and much valuable information contained in this work, I am indebted to the courtesy of Prof. Joseph L. Barfoot, curator of the Museum, Salt Lake City, Utah; to J. S. Hay, Esq., Editor of the *Avalanche*, Silver City, Idaho, and to the Editor of the *Herald*, Helena, Montana.

Permit me to hope that the present work will meet and merit the welcome of the thousands who have accorded their favor to my earlier publications, and that it may win the approval of the general public.

THE AUTHOR.

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CHAPTER I.

An Emigrant Train Westward Bound—Historic Ground—An Old Fortress on the Lake Shore—Reminiscences—A Bird's-eye View of Cleveland.

In and about the railway station in Buffalo, N. Y., one bright day in early spring in the year 1877, was a larger concourse of travelers than usual, awaiting the departure of the westward train. It was a motley assemblage. There were men in blouses and caps, long blue overcoats faded and worn; others in round-

abouts, with guns or rustic canes in their hands, or odd parcels in their arms, and long tobacco pipes in their mouths,—with strong boots that were russet with dust, homespun clothing of home manufacture; there were a few old men, bending under the weight of years; young men with strong arms, bronzed faces and hard hands; old women in caps and good natured faces; buxom young women with chests large enough for the great hearts and sound lungs they contained, attired in plain clothing, without ornament or decoration; some with babes in their arms and others leading little children with faces like a full moon, and great eyes that peered curiously into everything, while cramming into open mouths, sausage and pretzel; young maidens with the bloom of health, sparkling eyes and with figures and mien telling of strength and endurance—all of these people chattering like magpies, in the language of the Faderland, looking at the clock every few moments, eager for the hour of departure.

There was a smaller party of men in the strength of early manhood, with light hair and blue eyes, who had come from the north of Europe and were going, as they hoped, to meet their Scandinavian friends, in the far-off land of the Golden West.

The bell struck the signal for departure. The cry of "all aboard" instantly put the throng in motion, and with scrambling and running, falling and mistaking the way, then finding it by directions and kind assurances of the conductor and policemen—of which not a word was understood by one of the number, beyond the gentle tones and affable manners, which expression of good will never needs

interpretation—all were at length comfortably seated in the coaches, and the train moved onward, more and more swiftly, and the last sound of the whistle and clamor of its wheels was lost in the distance, as the iron steed dashed away toward the Great West with the great company who had exchanged the privations and penury of their native land, for thrift and prosperity in the land of their adoption; who had braved the perils of the sea, anticipating rich rewards for hardships endured, when at last the Eldorado of their happy dream should have been reached, and home should be dearer home again.

I, too, was going to the Great West, and accordingly took passage, the day following, for Cincinnati, there to meet, as I hoped, the little party who proposed to make an extended tour of exploration throughout the States and Territories, from the confluence of the Missouri and Mississippi, to the northern boundary of our country, and from the Mississippi to the shores of the Pacific, for he who would write of the "wilds of the West, beyond the bounds of civilization" must write quickly, or the party of yesterday and other parties of thousands and tens of thousands will be there before him, to convert the smiling prairies of primeval nature into golden wheat-fields and pretty gardens, to utilize the mountain torrents for turning mill-wheels, and to rear the church-spire and dome of the school-house where now the tall and stately forests extend their arms in token of welcome.

I was duly equipped with the supplies needful for the journey, from the most approved fishing-rod

that piscatorial art could devise, and rifle for which Daniel Boone would have given the peltries of an entire season, field-glass, microscope, note-book and pencil, with all the odds and ends which kind and thoughtful friends had deposited in my knapsack, and which—ten thousand thanks to them—I found most useful.

However fully and carefully may even an American read of the vast magnitude, the illimitable resources, the present and prospective advantages of our country, however he may wonder at the tabular showing and long columns of statistics that gazetteers take so much pains to collect, and so much pleasure in placing before him, concerning the rapid growth, the remarkable prosperity and general and singular beauty of our great western cities, he can attain a full conception of the marvelous facts only by making a tour of observation for himself; and when he has done so, he will be more inclined to glorify the American eagle, and pronounce for Yankee Doodle sovereignty than ever before. There is nothing, not all the patriotic addresses of Washington nor Patrick Henry, Webster nor Clay, nor all the Fourth of July orations ever read or listened to, will so intensify a man's patriotism, if he be intelligent and honest, as to make a tour of inspection from one boundary of Uncle Sam's domains to the other. He will see and feel wherever he goes that under the national flag there is that measure of liberty, equality and fraternity, that thrift and prosperity, that enterprise, energy, self-reliance, individuality, force of character and grandeur of achievements, which not all the experiments under

any other government, has the world elsewhere ever attained. Without participating in the spirit of rivalry which occasionally evinces itself in paragraphs in the local public journals of the chief cities, or caring in the least whether Chicago or Cincinnati maintains the greatest beef and pork-packing business, or a heavier grain trade, or whether St. Louis takes the lead, or Louisville outdoes all other cities in her operations in tobacco, or one city has a score or two more inhabitants than another, we may surely find enough to attract attention, awaken a lively interest and excite admiration and wonder in each and all of them; and this also in cities of lesser pretensions that are, in fact, fast rising to equal opulence and importance.

As we note the rise and progress of the chief cities—or that are entitled to such distinction to-day—we may form an idea of the greatness that will soon be attained by the lesser ones of favorable geographical position, having ample and direct facilities of communication with vast and thriving tributary regions of country, as well as with the great markets of the East.

How we delight in our quiet moments—in those lulls which now and then occur in the rush and whirl of the busiest lives—to step through the half-closed doors leading into the avenues of the past, and again wander through the paths we have trod, to climb the hills and drink from the fountains where we climbed, and from which we quaffed in the long ago.

Ah, wondrous fair have grown those paths which then were oft so monotonous and common place!

Forgetting all the roughness of the way, the briers that pierced our feet, the obstacles that were almost insurmountable, and the storms that beat upon us—forgetting the sultry noons, and the chill of bleak wintry days, and remembering only the cool depths of the green woods, crystal springs gushing from mossy rocks, flowery glades where we rested, and sun-kissed hills that blushed with beauty, we revel now in the enjoyment of what then with fortitude and hope we only endured. It is this tendency of the mind to dwell with pleasure on things of the past—this golden haze with which the hand of time clothes and glorifies pleasures past and treasures lost, that renders travel so delightful. What heart-pictures hang in memory's gallery, and how fondly do we turn to them in long after years! It is wise policy to forget the disagreeables of life—to mark only golden hours—to trap the sunbeams as they flit by us, and the wisest philosophy to extract all possible enjoyment from the commingling in life's experience of sorrows and joys, smiles and tears, tempests and sunshine.

With such musings I was so absorbed, that I did not hear the calling of the station, and had scarcely time to collect my possessions, to pocket my railway guide and to leave the train at the pretty little city of Erie, Penn., before it was again in motion.

In the beautiful lake shore region of northwestern Pennsylvania, where the town of Erie now stands, the searcher after historic relics may find some still existing traces of an old fortress, built by the French in 1749, and called by them *Fort de la Presque Isle*.

The historical associations of the locality are full

of interest. Though Erie is now "away down East" it was once on the frontiers of the West. A century-and-a-half ago, buffaloes roamed over this region and the Indian pursued his game. Those were stirring times, when white men came across the ocean to dispute with each other for the possession of the lands of the red men.

The adjoining peninsula from which the fort derived its name, did not at that time, extend so far down the lake, by several hundred yards, as it does at present, and was as far from presenting the picturesque appearance of to-day as can well be imagined. Dreary and barren, it extended to formidable length, to the obstruction of navigation along the coast, yet forming a safe harbor, where vessels might ride at anchor through the fiercest storm; and storms on Lake Erie were then as now, more dreaded by the sailor than on the broad Atlantic. This harbor has greatly changed in appearance since those early days, for the grand old trees which then cast their fantastic shadows far out upon its placid waters, have long since fallen beneath the strokes of the hardy pioneer, and in their stead have arisen the fisherman's cottage and the busy marts of trade and commerce. Gone forever from the coast of Erie is the Frenchman's batteau and the war canoe of the savage; level, overgrown and obliterated the graves of the men of those times, and crumbling and moss-grown are the quaint old head-stones that mark the last resting places of their great grandchildren. So have the years rolled on; so has the question of proprietorship of the lands and waters been solved; so will the problem of nationality and

ownership of the great West be solved, and the historian of another century will tell of a race that lived, that offered feeble resistance to the march of civilization, only to be crushed and swept from the face of the earth for their temerity. But the lake still brightens in the sunshine and darkens in the storm, as of old; still the waves dash in fury with the gale, still the wavelets answer to the gentle breeze, and placid waters reflect the features of nature and the works of man; and still the rocks and hills along the lovely shores tower aloft as in the days when they echoed back the gay song of the French voyageur, or the appalling war cry of the red men of the forest.

In the year 1760, the French abandoned the western waters and Presque Isle passed into the hands of the English, who held it unmolested until June 4, 1763—a fatal day to many of the garrisons posted throughout the West, for on that day was enacted the first bloody tragedy of Pontiac's war,—a war which, though of short duration, yet lasted long enough to fill the whole frontier with mourning and desolation.

Pontiac, who was chief of the Ottawa tribe and principal Sachem of the Algonquin Confederacy, was one of the most remarkable Indians in the annals of history. His form was noble, his address commanding, and he was distinguished for that lofty courage and burning eloquence that inspired his race with heroic daring, won the confidence of the Lake Indians, and moulded them to his will.

The plan of operations adopted by this powerful chieftain for effecting the extinction of the English

power, evinced genius and courage of high order. It was a sudden and simultaneous attack on all the military posts upon the lake. If all could be surprised in one day and every English banner which floated from the ramparts of all this line of forts be prostrated at the same time, the garrisons would be unable to exchange assistance, so that probably the war might begin and end with a single blow, and Pontiac again be king and master in the land of his fathers.

This plan he first disclosed to the Ottawas, one of the most powerful tribes in all the lake shore region, and having thoroughly convinced them of its wisdom and expediency, he then assembled a grand council of the Confederacy at the river Aux Ecorces. To these assembled tribes he urged the feasibility of his plan with all the cunning and eloquence of which he was master. He appealed to their fears, their hopes, their patriotism, their hatred of the English and their spirit of revenge. Aware of the great power of superstition over their minds, he appealed to this under the pretence of a revelation—as the much-married men of Utah have since done—a revelation which the Great Spirit had made to him in a dream. “Why,” said the Great Spirit, “why do you suffer these dogs to enter your country and take away the land I have given you? Drive them from it, and when you are in distress I will help you.”

This was the finishing stroke. If the Great Spirit was on their side, it was of course, impossible to fail. All the details of this scheme were arranged upon the spot, and all along the lake frontiers, and

even down to the borders of North Carolina, did the hostile tribes join in the terrible conspiracy.

Meanwhile the unsuspecting traders pursued their traffic in fancied security, with the seemingly friendly savages; the soldiers in the fort became idle and careless from inaction; the frontiersmen planted their corn and confidently hoped for an unmolested harvest, for now that the war with France was over, they feared no further disturbance from the Indians. Alas, even then a relentless foe was marching upon them with rapid strides.

Gradually every post was hemmed in by the confederate tribes. At last the fatal day came. The morning broke clear and calm in the delicious freshness of early summer. The grand old forest, clothed in all the rich luxuriance of leafy June, gave forth no warning of approaching danger to the doomed stockade, and yet through all its green arcades and deep recesses were silently mustering the vengeful foe.

At the fort the soldiers had repaired to their quarters for breakfast. Some, who had already finished, sauntered down to the beach, where they idly watched the sparkling waves as they swept in before the freshening breeze and dashed in feathery foam upon the sands; others were strolling aimlessly about the fortress whiling away the morning hours with jest and song. Suddenly a knocking was heard at the gate, and three Indians in hunting garb were announced, desiring an interview with the commander. They claimed to belong to a hunting party who had started for Niagara with a lot of furs, that their canoes were bad, and rather than go further

they would sell them at the fort at a great bargain; that their party had encamped by a small stream about a mile west of the fort, where they had landed the previous night, and where they wished the commander to go and examine their peltries, as it was difficult to bring them through the woods without pack-horses, and they wished to embark from where they were in case they could not trade. The story was plausible enough, and told with every appearance of truth, but no sooner did they get the commander and the few who had accompanied him within their camp, than they murdered them, and then sent some two hundred of their band back to the fort, bearing upon their shoulders what appeared to be large packs of furs, which they informed the officer in charge the commander had purchased and ordered deposited within the fort.

The lieutenant had been charged by his superior when he left the fort to allow no one to enter within during his absence, and well would it have been for the little garrison had this order been obeyed. Whether there was any parley held with the savages, or any reluctance manifested about admitting them, tradition telleth not, but the stratagem succeeded, and when within the fort the Indians threw off their packs which proved to be only an outside covering of furs concealing their weapons, and seizing these, with loud yells of triumph they rushed with demoniac fury upon the panic-stricken troops. Unarmed and outnumbered, resistance was of but little avail; yet we may well believe that many a brave fellow seized whatever weapon came to hand and died not unavenged.

A soldier who had gone out early in search of game, heard the hideous yells, and as he cautiously approached the fort, discovered a party of Indians dragging away several prisoners; turning quickly, he fled through the forest, and after many hair breadth escapes, finally arrived in safety at Niagara. Only one other was left alive from that horrid massacre, and that one was a woman. She had taken shelter in a small hut below the hill, and there she remained undiscovered until near the close of that fatal day, when her retreat was invaded by a hideously painted warrior, who made her a prisoner but spared her life. All the other prisoners were put to death with cruel tortures, and she alone escaped to tell the tale, but it was after long years of captivity more cruel than death.

Nine garrisons on that day of horrors, fell a prey to the fierce assailants; the remaining four either received warning in time to guard against surprise, or they were favored with commanders of superior skill and caution. With these the strategy of the wily savages was unsuccessful and the garrisons, although sorely pressed were enabled to hold out until relief arrived from the eastern settlements.

In the year following, Gen. Bradstreet went up the lake with three thousand men to the relief of Detroit. They passed Presque Isle on their way, and upon their return to that point a treaty of peace was agreed upon with the Delawares and Shawnese; but it was soon broken by the savages, and the frontier was kept in constant alarm and trepidation until Wayne's expedition in 1794. This renowned general and successful Indian fighter, on

his way to the Maumee, established a garrison at Presque Isle, and here on his return, two years later, he died and was buried at the foot of the flag-staff, but in 1809 his remains were removed to the church-yard of his former place of worship in Delaware County, Pennsylvania.

The next famous personage whose honored name is associated with Erie, was Commodore Perry, then only twenty-six years of age. He arrived at Presque Isle February 27, 1813, and immediately urged on the work of building and equipping the fleet, which under his daring and skillful command swept the British fleet from the western waters. The victorious vessels with their prizes so gallantly won on the memorable 10th of September, were taken back to the harbor of Presque Isle, where some of them afterwards sunk and remained in that condition for many years.

But the Erie of to-day, rich in historical associations as it is, no longer lies upon the frontier of the West.

Arriving in the city of Cleveland, and having but a day or two for observation, we made the best use of our time and of our eyes.

Upon the central public park there is a fine statue of Com. Perry, with emblematical surroundings. From its position, the lake,—a few hundred yards away—can be plainly seen through the vista of the wide spreading branches of grand old trees, which are so very numerous as to fully warrant the name which distinguishes Cleveland as the “Forest City.”

There is not a more cleanly and beautiful city on the continent than Cleveland. Situated upon a

bluff a hundred feet perhaps, above the lake, with other bluffs and hills that form the southern boundary of the city, which is built on both sides of the Cuyahoga river, its sanitary condition in relation to drainage, is all that can be desired. Along the eastern frontage of the city rises terrace above terrace, clothed with verdure, while the plateau above is crowned with a lovely park, adorned with choice flowers, ornamental trees, shrubs and grottoes, and laid out with pleasant walks most enjoyable at all times in warm weather, but especially charming upon a moonlight evening, with the lake in full view, its pure waters shimmering and sparkling like molten silver, with steamers and sailing vessels in the back-ground of the picture, and in the foreground countless little boats and canoes plying at the pleasure of parties who direct their course, and with a fine band discoursing delicious music to the happy groups who come hither for a pleasant promenade.

Euclid Avenue is one of the most delightful thoroughfares to be seen in any city in this country. Broad, level and skirted with large ornamental trees that almost mingle their foliage from opposite sides, the avenue is an arcade or bower of living green, affording a delightful shade, deliciously cool and refreshing in midsummer, while myriads of birds—an importation of English sparrows, and their progeny—hold high carnival in this forest of beauty. These little birds, by the way, are great protectors of the trees; they endure the cold weather with wondrous hardihood, and with the daily offering of crumbs which the people then

gladly bestow, they manage to pick up a living during the "glacial period" of a northern winter, and they avail themselves of the cosy cots generously provided for them, becoming very tame and almost familiar with their patrons, and though there is not more music in their tiny throats than in a penny whistle, they do their best to express their gratitude, which is more than can be said of all bipeds.

Elegant residences with spacious ornamental grounds and pretty lawns extend for miles along this charming avenue of the thriving, busy and prosperous city, which may well lay claim to the possession of some of the best schools, finest churches, most substantial blocks, largest warehouses and workshops, excellent hotels and best news journals to be found in any of the great cities of the West.

Cleveland is every year becoming more and more a favorite summer resort for people of the sunny South who seek to escape from the scorching atmosphere of the torrid clime and find a delightful breathing-place in the cool regions of the North. In late spring, balmy summer and early autumn, Cleveland is in holiday dress, and most delightful. In early spring and late autumn it is a good place to vacate, unless one has India-rubber lungs and throat lined with vulcanite. In mid-winter, with good sleighing, the visitor will see many of the finest turn-outs, and on Euclid avenue especially, witness a scene of gaiety and life noticeable in few other cities.

CHAPTER II.

The Mounds of Ohio and the Mound Builders—Excavations and Interesting Discoveries—The Primitive Settlement of America—Washington's Island—Views of Pittsburgh.

The non-arrival of two or more gentlemen from the other side of the ocean, who were to join our party in St. Louis, occasioned a short delay in starting upon our proposed expedition to the West, and though somewhat disappointed and impatient to proceed, as it was already the first week of May, and I wished to see the prairies before the advance of the season should have withered their verdure, I availed myself of the opportunity thus afforded for visiting localities and scenes of special interest in the "Buckeye State" and in Kentucky. In these sections of country there are a thousand things of extraordinary interest to see, and well worth all the trouble and time required for doing so.

An opportunity for seeing the great earth mounds of Ohio was not to be neglected. A profound, perhaps impenetrable mystery envelops alike the construction and purposes of these wonderful works, the creations of a race of men who have been dust for centuries, of whom no other record or memorial has ever been discovered than these monuments, which are, if undisturbed by man, as lasting as the pyramids of Egypt. These artificial mounds are very frequently connected with the remains of forts, walls and other fortifications, that for engi-

neering skill and mathematical ingenuity would compare favorably with many works of similar character of the present day.

I first visited these old-time fortifications near Newark, Ohio, at the forks of the Muskingum River. These works are on the most extensive scale, extending over an area considerably larger than that occupied by the entire city of Cincinnati. The fortifications face the north, and lie between Raccoon Creek and the South Fork, forming three sides of a rhomboidal figure. On the extreme left there are the remains of a circular fort, which contains about twenty-two acres. In the center of this fort is an observatory of stone, that evidently at the period of its construction, rose to a far greater height than the surrounding territory, of which it commanded an unobstructed view for many miles in every direction. This fort and also the other works connected with it, are built on the bluffs of the two streams. Northeast of it, and nearly half a mile distant, there is another larger fort, octagonal in shape, which encloses about forty acres. It is connected with the former by two parallel walls that originally formed covert ways. From the latter, parallel walls extend southward for a distance of several miles, and from their construction it is probable that these formed a line of connection with other works of a similar character, located about thirty miles distant. From each of these forts, covert ways extended to the river, on the west and north. The larger of these forts is connected by two high walls with another fort nearly four miles to the eastward, and situated near

the junction of the two streams. This is nearly square and covers an area of twenty acres. It communicates with the river on the north by covert ways, and with two small redoubts and a number of mounds, by parallel walls. In this manner it is connected with another large fort containing nearly thirty acres, and situated about two miles to the southwest. The last, like the first, is circular, and is situated about four miles from it.

The mounds connected with these fortifications were evidently used as burial places for the dead—probably those who fell in battle—as skeletons and fragments of the bones of human beings have been found in them. Flint arrow and spear-heads, and other stone implements are found in this locality in great abundance.

I subsequently visited one of the most remarkable of the burial mounds located in Lancaster, Fairfield County, Ohio. It is about fifty feet in diameter, and twenty feet in height. A few years ago it was opened, and in it were found twelve human skeletons, inclosed in an earthen vessel which was moulded with considerable skill, but without emblem or ornamentation. This vessel rested upon a furnace of unhewn stone eighteen feet in length. In the same vessel were found many shells, beads and arrow-heads. The furnace contained a large quantity of ashes and charcoal, and the vessel in which the skeletons were deposited bore marks of the most intense heat. Did the Mound Builders dispose of their dead by cremation? In most cases throughout the West, where, by the way, burial mounds are very numerous, the exhumed remains

of the Mound Builders have been found highly calcined.

The Mammoth mound of West Virginia was next visited. It is situated on the flats of Grave Creek near Elizabethtown, Marshall County. It is, perhaps, half a mile distant from the river, and may be distinctly seen from the decks of passing steamers. Situated on the level "flats," it presents a striking and interesting appearance. It occupies an area of about two acres, and slopes gradually from the summit, which rises far above the tops of the tallest trees that grow at its base. The mound is surrounded by an enclosure embracing several acres, which is now utilized for the county fair-grounds. Upon its sides, which are clothed with a luxuriant growth of blue-grass, large forest trees of oak and poplar have grown, and judging from the size and number of these, Mammoth mound is as old as the hills a mile away on the opposite side of the river. A gigantic oak that formerly grew on the summit of the mound, and which was cut down to give place to an ornamental building, erected a few years ago, showed by its concentric circles that it was at least half a century old. In the summer, when the trees upon the mound are covered with foliage, it appears to be twice as large as it really is.

The excavations which have thus far been made have proved unsatisfactory; no relics especially interesting have been discovered therein. Speculation only can define its purpose, but there are reasons which seem to warrant the opinion that it was designed for religious ceremonies; it may, however have formed one in the series of signal stations,

which as already remarked, extend the entire length of the Ohio; and this idea is strengthened by its height above the general level, which is about one hundred and fifty feet. Its extraordinary size precludes the idea that it was erected as a place of interment for the dead, and it is of a different character from the structures designed for defensive purposes.



About four hundred yards from the base of the mound, there is an immense basin from which the earth was taken to build it. With what patience was the herculean labor performed! Thousands of men doubtless aided in its construction. Toiling as the ants toil, they may have transported the material in their arms, or possibly the huge animals of that period may have been employed for the purpose. The basin, like the mound, is covered

with a growth of gigantic forest-trees which are of larger size than those upon the mound; many of them are sycamore and elm.

The ancient earth-works at Marietta, O., are situated on the east bank of the Muskingum River, about half a mile above its junction with the Ohio. Though not so extensive as the works at Newark,

they are, perhaps, more generally interesting from the more remarkable relics that have been found in them. In one of the mounds in this vicinity a highly ornamented silver cup was discovered a few years ago. It is said to have been gilded upon the inside.

In this vicinity there are several forts or inclosures surrounded by earthen walls from six to twelve feet in height. The largest fort is nearly square, and embraces nearly forty acres. On each side there were three gateways, and on the west covert ways extended to the Muskingum River. The city cemetery embraces a part of the space formerly occupied by a small fort similar in construction to those already described. A number of mounds are within the enclosure; one of the largest of which is on a conspicuous site near the center of the grounds. This mound is a little more than a hundred feet in diameter at the base, and about thirty-five feet in height. It is surrounded by a ditch five feet in depth and twelve feet wide, and defended by a parapet five feet high. Among the monuments in the cemetery are those of Commodore Whipple, of Revolutionary fame, General Rufus Putnam, Jonathan Meigs, once Governor of Ohio, and many others. Will these memorials be as enduring as the wonderful works of the mound builders? Numerous remains of the ancient race have been exhumed from the mounds in this locality. Here in the same ground are the bones of men whose lives may have been separated for a thousand years, perhaps a much longer period.

The mounds that were used wholly as signal

stations, are very numerous on the Ohio below Cincinnati, and extend from the region of the Alleghany mountains to the Mississippi River. They all occupy commanding sites on the most prominent points, and each one is within view of that immediately above and below it. Watch-fires, or a system of colored lights may have been their means of communication.

The earth in these mounds resembles the burned clay of brick-kilns, and it is seldom that human remains or relics of any kind are found in them. They appear as though fires had been kept burning upon them for ages.

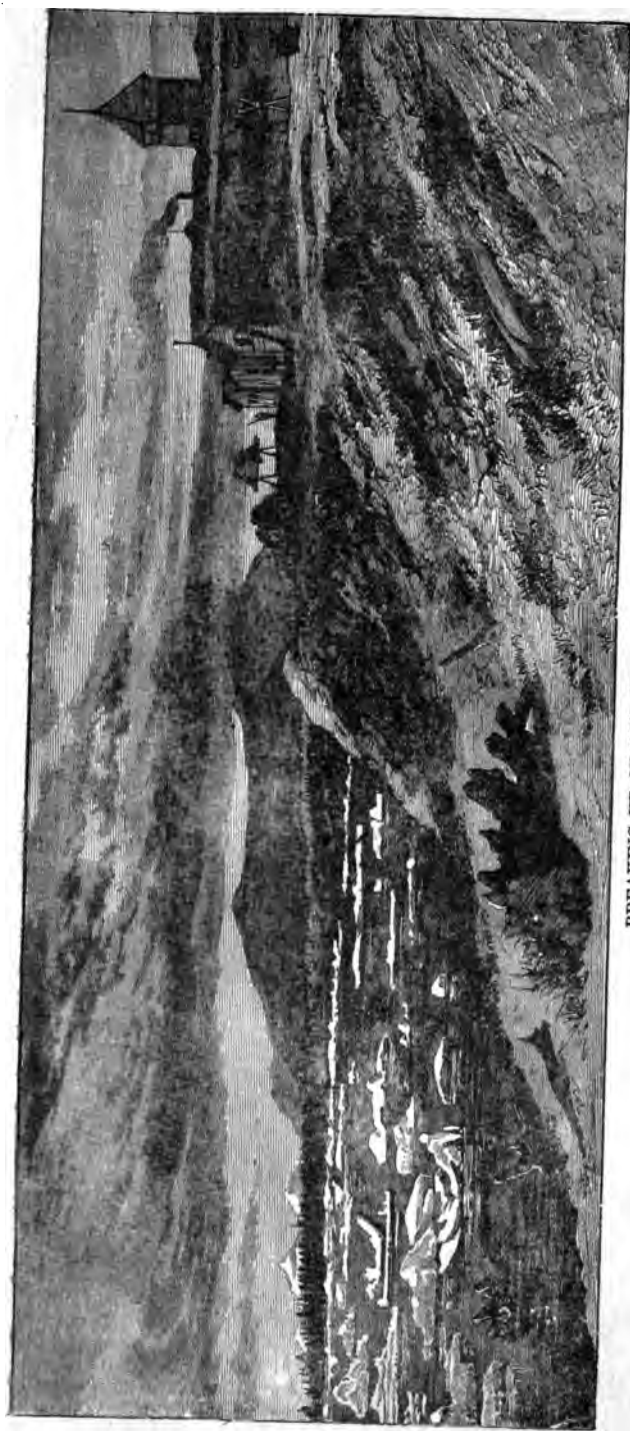
In Perry county, and in many other places along the bluffs of the Ohio, are numerous "Rock Houses." These are certainly very quaint structures. At the mouth or entrance they are generally from three to ten feet high; the roof slopes back until it reaches the floor. The depth seldom exceeds twenty feet. One of these houses is known as the Indian Morter Cave. Within the mouth of it, is a large stone that has fallen from the roof, in which there are several round holes about six inches in diameter, from one to two feet deep, tapering to the bottom; these appear to have been made with an iron instrument. Several of these stone huts have been entered by visitors, who have been rewarded for their pains only by finding arrow-heads and stone axes. In one of these we discovered several Indian graves that were walled with stone.

As numerous as are the mounds along the Ohio River, they are still more so on the lands adjacent to the Missouri, the Mississippi, and in Adams

County, Illinois, and in other regions of the West. An examination of these wonderful works shows conclusively that the mound builders were numerically a great people, that they had powerful enemies and consequently were compelled to erect defensive works; that they possessed a knowledge of mathematics and engineering and the art of working in metals, at least to some extent, all of which implies a good degree of intelligence.

It is the general opinion that these mounds, fortifications, and rock houses were not constructed by the ancestors of the red race, but by a people wholly distinct from them. There is nothing in the traditions of any Indian tribe relating to these structures, nor to a people by whom they were constructed. The traditions of the Indians relate only to the prowess or wonderful skill that some warrior displayed in taking human life. Concerning the antiquities of America, no living race presents an iota of history, data, or tradition upon which to base a theory.

By those who accept the Mosaic account of the creation of man, various theories have been advanced to account for the primitive settlement of America. It is argued by certain eminent writers that this continent was peopled by Asiatics, who reached it by the way of Behring Strait. This theory lacks one essential feature and that is practicability. To reach an inhabitable portion of Asia from any part of America now inhabited by a civilized people, by the only route claimed as practicable in early times, would now be regarded as an impossibility, notwithstanding the fact that the people of



BREAKING UP OF THE ICE ON THE OHIO.

America have had hundreds of years experience in exploring unknown lands; and yet it is maintained that it would have been vastly easy of accomplishment three thousand years ago, when men were so utterly helpless that they could not even maintain a wandering existence amid the mild and fertile regions bordering on the Red Sea without the special interposition of God in their behalf.

Other writers maintain that America was first reached by crossing the Atlantic. The Phoenicians in the days of Solomon, visited Ophir, which some geographers assert was America. Hanno, a distinguished Carthaginian, who lived three thousand years ago, sailed for thirty days in a southwesterly direction from the Strait of Gibraltar, and the lands which he visited were probably some of the Islands contiguous to America, or perhaps the main-land itself. Other navigators of ancient times are said to have visited "a country across the great sea which was many times larger than the whole of the then known world, and whose rivers were like seas."

Some writers maintain that the red men of America are descendants of the lost tribes of Israel, having discovered in their religious rites and customs much that is analagous to the practices of the ancient Jews; that America is "the far country wherein man never dwelt" to which allusion is made in Esdras, the land to which the Israelites bent their wandering steps. There is a striking resemblance between the mummies found in the caves and ruins of the west, and those found in the catacombs of Egypt. Assuming that the ancients were in frequent communication with this continent—which

assumption seems to be warranted, since such communication was practicable, notwithstanding the art of navigation was but imperfectly understood in those days—it is comparatively easy to account for the primitive settlement of America,—so say the theorists; but the aboriginal history of our land will doubtless forever remain a mystery. We may gaze with wonder upon the ruins of Peru and Central America, the teocallis of Mexico, the ancient cities of Arizona and New Mexico, and the mounds and fortifications of the Ohio and the West generally; we may unearth the buried trinkets and utensils of war, the idols and ornaments, and implements of stone; but our knowledge of the men who made them, of the lives they led and the fate that swept them from the land will forever be utterly wanting. A careful examination of the works of their hands, which centuries have not obliterated, will afford some knowledge of the customs of the people and so far link their history with that of mankind and relieve the gloom that envelops the race in mystery.

Not how the Indian came here, but how to get rid of him has been the great question of the American people, and there is no mystery whatever connected with the disappearance of the thousands of “braves” who once sang their war-songs and joined in the chase through all the wild and picturesque regions, from the lake to the gulf, and from the shores of the Atlantic to the plains of the west.

“Alas for them! their day is o’er,
Their fires are out from shore to shore;
No more for them the wild deer bounds—
The plough is on their hunting grounds,
The pale man’s axe rings through their woods;

The pale man's sail skims o'er their floods ;
Their pleasant springs are dry ;
Their children—look, by power oppressed,
Beyond the mountains of the west—
Their children go—to die."

Having reached the point where the rapid Alleghany rushing down from the North, meets the more gently flowing waters of the Monongahela, as they come pouring in from their source among the hills of Virginia, forming by their confluence the Ohio,—named in the early times by its French discoverers *La Belle Riviere*—"the beautiful river," I visited Washington's Island, in the Alleghany, a short distance from the flourishing and prosperous city of Pittsburgh, whose coal mines in the neighboring hills supply fuel for the cities and towns along the river even below Louisville, whose glass houses and factories send their merchandise all over the country and across the Atlantic; whose industries and enterprise have made the city what it is—a vast workshop, whose fires are never extinguished, a mart of trade that gives the city rank among the first and best in the union.

On the Island, George Washington, while returning from his mission to fort Le Beuf—thirteen miles from Erie—passed a most dreary and comfortless night. He had left his worn-out horses and heavy baggage, and for the sake of expedition was traveling on foot, accompanied only by Christopher Gist, an old frontiersman of great courage and sagacity. When they reached the Alleghany at this point, instead of finding it frozen over, as they had expected, they saw that the ice was broken up and driving in great quantities and huge masses down the stream.

Washington thus describes the situation:

"There was no way for getting over, but on a raft, which we set about making, with but one poor hatchet, and finished just after sun-setting. We next got it launched, then went on board and set off; but before we were halfway over, we were jammed in the ice in such a manner that we expected every moment our raft to sink, I put out my setting-pole to try to stop the raft, that the ice might pass by, when the rapidity of the stream threw it with so much violence against the pole that it jerked me out into ten feet of water; but I fortunately saved myself by catching hold of one of the raft logs. Notwithstanding all our efforts, we could get to neither shore, but were obliged, as we were near an island, to quit our raft and make to it.

"The cold was so extremely severe, that Mr. Gist had all his fingers frozen, and the water was shut up so hard during the night that we found no difficulty in getting off the island on the ice in the morning.

"As we intended to take horses here, and it required some time to find them, I went up about three miles, to the mouth of the Youghiogheny to visit Queen Aliquippa. I made her a present of a watch-coat and a bottle of rum, which latter was thought much the better present of the two." Fancy the "Father of Our Country" paying court to a squaw, by means of a watch-coat and a bottle of rum, and then facetiously remarking that the latter was thought much the better present of the two!

Returning to Pittsburgh, we visited the old fort which formerly guarded the river or rather the delta,

and with which many highly interesting associations of the early history of the country are connected; then turning from the past to the present, and with some difficulty climbing to the summit of the highest hill on the opposite bank of the river, we had a fine view of the city. It was soon after sunrise, the morning was delightful, and a gentle breeze wafted far away the clouds of smoke which had veiled the city the day before, and the dense volumes of smoke constantly rising from scores of tall chimneys and from furnaces. Below us was the great city, with its cathedral and churches, its palatial hotels and great factories, its elegant residences, imposing stores and warehouses, and busy throngs of people. Immediately at our feet was the Monongahela—an important vein of the great system near the greater one, a mile below. On either side of the bridge which spans the Monongahela, connecting the busiest portion of the city with the little hamlet of Birmingham, for a long distance up and down the river, were numerous flat boats or barges laden almost to the water's edge with coal, destined for the southern market—coal in such prodigious quantities that it would seem the hills had been excavated to mere shells, but the supply is as abundant as ever, and issuing from the mouths of dark caverns are seen numberless carloads of coal to freight other barges which are to arrive from the river below.

These barges are a peculiar feature of river navigation. They are very powerful, light draft, and with a capacity of holding from eight thousand to ten thousand tons of coal. The exports of this

product from Pittsburgh amount to forty or fifty millions bushels annually, of which Cincinnati consumes about one-tenth, and handles much of the remainder. The barges go down the river in charge of a tug, from twelve to twenty-five in a tow. Both barges and tugs are built expressly for the coal trade, and the tugs are as noisy and trim craft as any to be seen in eastern rivers or harbors.

The waters of the Ohio had been swollen to a great height by recent rains, which, when they come, pour in torrents adown the hillsides in rivulets and broad streams, causing a rise of from ten to thirty or forty feet in an almost incredible short period of time. Unusual activity prevailed. Heavily laden barges were constantly departing and empty ones taking their places. These coal boats are very liable to disaster, and not unfrequently sink before reaching their points of destination.

The miners are generally foreigners. They are industrious and contented with their lot. To many of them the world is bounded by the neighboring hills on all sides but one, and that one the extremity of the dark mine. There are many families of the miners who have never seen any other part of the world than that presented to view from the summit of the hills that their husbands, sons and brothers burrow year after year. Here they live and here they die, knowing and caring no more for the great world and its affairs than for the planets and what is there going on, beyond the advance or reduction of wages, which is a matter of vital interest and importance to them.

As a natural consequence of such isolation, these

people are very different from other men, and though generally ignorant of all else than coal mining, are hospitable and friendly, more especially to each other.

The steamer will leave to-morrow, and we must see the "beautiful river" which touches Ohio for four hundred and seventy miles. Sixty years ago a vast forest covered almost the entire country between Virginia and Lake Erie. Now it has a population of more than three millions and upwards of fifteen million acres of cultivated land.

CHAPTER III.

Navigation of the Upper Ohio—Scenery—Blennerhassett Island—The Character of Aaron Burr—Arrival at Cincinnati—The City as it was and as it is—The Great Southern Railroad.

The steamers that ascend the Ohio to Pittsburgh, the head of navigation, are mostly light draught boats, from seventeen inches to two or three feet draught, and with a capacity of from four hundred to five hundred tons, with good passage accommodations. Many are built with a view to making quick time, so as to compete with the railroads, and these steamers excel those of former days in capacity, comfort, speed and safety.

The fastest boat on the upper Ohio is the "Buckeye State," which has made the distance from Cincinnati to Pittsburgh—about five hundred miles—in forty-three hours. The usual time for making the trip is from two to three days. The average speed of passenger packets, when in running trim, is ten miles per hour, against the stream, which is an advance of the speed of the first steamer on the river—the "New Orleans," which was built at Pittsburgh by Fulton in 1811, and which by tremendous puffing and asthmatic wheezing ran at the then astonishing rate of *four* miles an hour. These boats are often chosen for tours, excursions and bridal trips, and one may meet on board the most agreeable people and enjoy all the refinements and elegance common to first-class hotels. The trip on

the "Fleetwood" was delightful from the hour of departure to our arrival in Cincinnati.

The scenery along the river, upon both sides, is for the greater part picturesque, interesting, and often beautiful. Here a bluff that overhangs the waters, there a shelving bank of easy ascent, crowned with stately trees; cultivated and fertile lands, rich with the golden harvest; now a grand old tree stands sole monarch of the field,—its gigantic trunk twined with the verdant vine, a fragile creature, sheltered by the powerful arms of a forest giant; a copse amid whose branches are birds—some of beautiful plumage, some of song; thriving villages, rural hamlets and the lone cottage on the river's bank; while in the back-ground of the picture rise grand old hills on either side, upon whose summits are palatial homes, of various architectural styles, half hidden by the trees; now in the distance having the semblance of castles of olden times, with turrets, towers and battlements, and now a modest cottage with vineyards of great extent, just putting forth their tiny leaflets.

We pass little boats of fishermen, and ferry boats of primitive style; an upward-bound steamer, that exchanges compliments with us by shrilly shrieks that echo among the distant hills; drifting logs, against the near approach of which the pilot must be vigilant; a coal-barge wreck; little islands clothed with verdure; persons upon the banks signaling our passengers,—all a seemingly moving panorama of interest and beauty, as our steamer glides swiftly on.

The high stage of water was favorable for a quick

passage, for on this river obstructions to navigation are numerous. In winter the boats are generally frozen in for about two months, and quite a number are lost by being crushed when the ice gorge breaks. In summer the water is often so shallow, that in places it is only fifteen inches deep, but by the rains of autumn, as by the melting snows of early spring, the river is swollen to a depth of fifty or sixty feet. The channel is continually shifting, forming new points and new islands, the former by washing away the shores, and the latter by the accumulated deposits during freshets. Other obstructions are snags, wrecks, logs, etc., in the channel. These it is the business of a wrecking company under the direction of government inspectors to remove, and also to fix lights and buoys at dangerous points. The government has at times constructed wing-dams for deepening the waters in shallow places, and most admirable contrivances these are, in the esteem of river navigators. One of the greatest obstructions to navigation on the Ohio are the bridges, by which it is spanned at numerous points along its entire length. Draw bridges have been tried in several instances, but these are not favored by either steamboat or railway management. The expense of a bridge is of course immense, if built high enough to allow the largest steamboats to pass under it at the time of the highest water. The bridge connecting Cincinnati with Newport was raised thirty feet above its original height at a cost of several hundred thousand dollars.

In the Ohio is an island, once the charming home

of Blennerhasset—an Irish gentleman of large wealth, luxurious tastes and a noble, generous heart. His wife was a lady of high culture and refinement, with qualities of heart which made her home a very paradise. Here they enjoyed all that opulence could supply to gratify taste and insure happiness. The couple were happy and content, respected and beloved of those who knew them best. At length came to their home Aaron Burr, and by his wily arts brought to them utter ruin, as he always did to those who trusted him. The story is an old one, but none the less touching from oft recital.

And who was Aaron Burr? Let us briefly analyze his real character, concerning which there has been a diversity of public opinion. Colonel Aaron Burr was not a great man, but he was a great villain. He was a daring speculator, a gambler in politics, a gambler in his amours, and a gambler in land, with all the coolness, shrewdness and suspicion of a speculator. We are not of those who acquit Burr of having been a traitor, but we vindicate his project touching Mexico, from the fact that Spain and the United States were on the brink of a war, their armies being within striking distance of each other, and it was only in case of a collision that Burr was to invade Mexico, the campaign having been actually planned by General Wilkinson, the commander-in-chief of the American army. The enterprise was therefore really laudable, but the public opinion of that day connected Burr's project of invading Mexico with a design of separating the Western, or "Mississippi States," as they were called, from the



Atlantic portion of the American Union. It was well known that he had purchased a large tract of land on the Ouachita—the Bastrop lands—and it was believed that the emigrants who colonized that land were really designed not to act against Mexico, but to accomplish a project for overturning the Union of States. The Bastrop purchase was then regarded as a *ruse de guerre*. But at the present time it is doubtful, so artfully did Burr concoct his scheme, if this purchase was merely one of his numerous land speculations, or if it was really designed for the purpose we have mentioned. The acquittal of Burr when tried for treason, at Richmond, amounts to nothing, for under the ruling of Judge Marshall, the Chief Justice of the United States, the jury could not convict the prisoner, and they said as much in their verdict.

Judge Marshall knew the hatred felt by President Jefferson for Burr, and as he himself hated Jefferson with a bitterness known only to Virginian politicians of that day, there is no doubt that he strained the law to suit his own personal and political views. To accomplish this end he seized upon the fact that Burr was not actually and personally present at the very place where the expedition was organized, and where it was laid in the bill of indictment, to charge that such being the fact, they should acquit the prisoner. The charge of Judge Marshall gave great offence, not only to the President, but the Senate flamed with indignation, and John Quincy Adams, then a Senator, introduced resolutions remedying that defect in our laws, and making a conspirator guilty, absent or

present, at the scene of operations. It is well known that the jury returned a defective verdict, that Burr immediately demanded a verdict of "guilty or not guilty," and that on this demand the jury rendered a verdict of "not guilty," in accordance with the implied instructions of the presiding judge. In fact the trial was all a farce.

While it is not absolutely certain that Burr was guilty of treason, those who knew him best believed it of him. One thing is certain, that he was utterly devoid of integrity; and the few persons who remained attached to him during his life were men not above suspicion themselves. Aaron Burr was destitute of honor. Washington doubted his integrity and discharged him from his military family. Jefferson detected him as a traitor and dishonest schemer. John Randolph, foreman of the jury, hated him, and in fact every man of character, every man of honor and honesty who had the slightest dealings with Colonel Aaron Burr, as in the case of Jackson during his presidency, shunned his society and doubted his integrity. And even in his latter days, when by prudence and manly pride, he might have restored himself to the good opinion of the society which had discarded him, he was so deficient in self-respect that he endeavored to converse with Henry Clay, when this gentleman had a public reception in New York on his return from Ghent, after the latter had declined to take his hand, and he meanly begged the favor of a private interview.

What can we say of such a man, except that he was destitute of character, honor or pride?

Burr's appearance was striking from contrast with every one around him, for he wore his hair in a queue, and was dressed in small clothes. His height was about five feet six inches, his figure well made and well knit, and his face very intellectual, having the Roman features well defined. His air and bearing was that of perfect indifference to every thing around him.

Since the days of Jefferson, the public opinion has greatly softened toward Colonel Burr. The loss of his daughter, the truly beautiful, gifted and good Theodosia, wife of Governor Alston, of South Carolina, by a tragical death at sea, for she was supposed to have been compelled to "walk the plank," when the pilot boat "Rose in Bloom" was captured by pirates on her voyage from Charleston to New York, when added to the outburst of indignation which assailed him everywhere, all over the country, seemed to be too much for human endurance, and would have broken the heart of thousands of men.

But Burr was a man of iron. It is impossible to read his journal without being astonished at his fortitude, his indifference and endurance of every kind of indignity when he was actually skulking about the streets of Paris. He tells us how he was compelled to change his usual route when walking the streets, because he owed an old woman three or four sous for cigars. Driven from London by the British ministry, he went to Paris. Driven from Paris by the French minister, he wanders to the Hague, and here he suddenly turns up the owner of thousands, won by some lucky speculation.

Such was Col. Aaron Burr, an officer of the Revolutionary army, of acknowledged ability, a lawyer of distinguished talents, Vice President of the United States, and filling the position with the highest respect of the Senate over which he presided during the first four years of Jefferson's administration, and enjoying the friendship of the most eminent men of the political party which governed this country for half a century.

Burr commonly wrote his letters in cypher, and he traveled under assumed names, when both alternatives were a needless exaggeration either of his personal risk, or his importance. The incognito he strove to maintain on landing at Boston, and his disguised method of coming thence to New York, after his long exile in Europe, are in ludicrous contrast to the public indifference when, ten days after, he resumed the practice of the law in the city, entered with such melodramatic privacy. It was this mystery, this suspicion, this belief in the villiany of mankind, which caused the world to visit him with his own judgment.

But the steamer sounds the signal of near approach to the city, the lights of which now glimmer in the streets, and upon the landing. On our left is Newport and her sister city of Covington. The bustle on deck denotes that the men are preparing to "make fast;" and now we have reached the shore of the good old city of Cincinnati.

During the visit of Charles Dickens to this country, in 1842, he wrote of Cincinnati: "It is a beautiful city, cheerful, thriving and animated. I have not often seen a place that commends itself so

favorably and pleasantly to a stranger at the first glance, as this does; with its clean houses of red and white, its well paved roads and foot-ways of red tile. Nor does it become less prepossessing on a closer acquaintance. The streets are broad and airy, the shops extremely good, the private residences remarkable for their elegance and neatness. There is something of invention and fancy in the varying styles of these latter creations, which after the dull company of the steamboat is perfectly delightful. The disposition to ornament these pretty villas and render them attractive, leads to the culture of trees and flowers and the laying out of well-kept gardens, the sight of which to those who walk along the streets is inexpressibly refreshing and agreeable. I was quite charmed with the appearance of the town and its adjoining suburb of Mount Auburn, from which the city, lying in an amphitheatre of hills, forms a picture of remarkable beauty, and is seen to great advantage. The inhabitants of Cincinnati are proud of their city as one of the most interesting in America, and with good reason, for beautiful and thriving as it is now, and containing as it does a population of 50,000 souls, but two-and-fifty years have passed away since the ground on which it stands—bought at that time for a few dollars—was a wild-wood, and its citizens were but a handful of dwellers in scattered log-huts upon the river's shore."

Of the beautiful gardens of which Dickens wrote, few remain within the city's old boundaries, but every hillside and summit is crowned with the most inviting homes, and adorned with lovely gardens;

a large portion of the city's area then occupied as residence property, has been monopolized by business, which year after year becomes more imperative and pressing in its demands—crowding dwellers backward, tearing down old homesteads, leveling pretty gardens, but giving in place thereof lofty and spacious edifices for trade and manufactures; and it requires no stretch of imagination to believe that within the next thirty years the land extending from the base of the hills that enclose the city, to the river, will be chiefly occupied in like manner.

Our drive through the charming environs, and more especially through the delightful villages of Clifton and Avondale, left in the mind the most lovely pictures for pleasant memories and comparisons. Clifton—which has not yet lost its individuality by incorporation with the great city, as Mount Auburn and several other neighboring villages have done—is built upon the highlands in proximity to the city, and yet sufficiently remote to insure pure air and entire freedom from the city's din. Its natural beauty, and the evidences of taste and refinement that burst upon the view on every side cannot fail to delight the visitor, who should take ample time to explore its beautiful avenues and lovely grounds, and view the many elegant mansions, charming villas and pretty cottages, that constitute the village. The grounds of nearly every residence are spacious and elegant in their culture and decoration.

The view of Cincinnati from Mount Auburn—a lovely little eyrie upon an elevated plateau—affords an idea of its compactness and its business facili-

ties. One can readily believe as he looks down upon the city and the eye follows the range of buildings stretching far to the westward, that the claim of her citizens to a population of nearly 350,000, is not exaggerated; but the atmosphere over the city, at any season of the year, is so laden with clouds of dust and smoke that its buildings do not appear to possess that whiteness and cleanliness for which Dickens gave credit to those he looked down upon.

The view of the river, from this point, is delightful as it winds its course between the verdure crowned hills of Ohio and Kentucky, dotted here and there by a steamer, a tug-boat, or a fleet of coal-barges. At the levee, or "public landing" are a few steamers, loading and discharging freight, and several more on board of which there is little indication of business. Traveling by steamer up or down the Ohio is certainly delightful to those who enjoy interesting natural scenery and can afford the time, but there are few business people who do not prefer a speed of thirty or forty miles an hour to ten or twelve, when every hour is precious, so the passenger-trade on the river has fallen off and is year by year becoming less.

From our point of view, we look down upon Covington and Newport, and listen to the music of the band that reaches us from the military post of the latter city.

Passing down the hill from Mt. Auburn—upon which there is an incline railway—we leave scenes of beauty to find those of greater interest to business men.

The public parks, of which there are several, are spacious, beautifully laid out and attractively adorned; Eden, Lincoln, and Washington are the favorite oases of this busy city. There are few cities so highly favored with delightful drives and perfect road-ways. The macadamised avenue in the western part of the city is a favorite resort on a summer's evening, especially for those who drive fine horses. A drive to Clifton, Avondale, College-Hill, Walnut Hills, the Grandin Road, the River Road—anywhere in the charming suburbs is exceedingly agreeable; the extensive vineyards, the numberless gardens seeming to vie with each other in productiveness, beauty and fragrance, the palatial residences with pretty lawns, variety of shade trees and flowering shrubs, grassy slopes and terraces, wild-wood groves, hedges, paths, hills and streams—all scenes of such beauty as cannot fail to impress the visitor most favorably and assure him of the general thrift, taste and culture of the people of Cincinnati.

The Industrial Exposition, which has become an established institution, is increasing in its attractions with every passing year. Cincinnati is emphatically a manufacturing city. Its many factories, foundries, and workshops employ thousands of workmen and represent many millions of invested capital. The opening of the great Southern Railroad was a grand event for Cincinnati. The coal fields of Alabama alone are calculated to yield thirty-two and a half billions of tons. More than enough to supply the entire world, at the present rate of consumption, for two thousand years! The brown hematite ores in the northwest of the State,

in juxtaposition with the pure, hard bituminous coals of the Warrior field, and the red and brown hematites of Central Alabama, adjacent to the Cahaba coal, justifies the prediction that this State alone will in the future produce annually more iron than is now made in England, Scotland and Wales combined, and at less cost. Tennessee has more coal than Alabama, with iron ore in close proximity, superior in quality and inexhaustible in quantity; Kentucky and Virginia each have more coal than Tennessee and Alabama together, and more than England, Wales and Scotland ever had, and a larger area of coal than the great coal-producing State of Pennsylvania, while their ores are rich and abundant. How wise and far-seeing was it in Cincinnati to project the Southern Railroad into this incalculably rich region, and offer her own subscription of ten millions of dollars toward its construction. It is the most magnificent prize that any city ever attempted to win.

“Starting at Cincinnati, it passes through seven successive counties in the very heart of Kentucky, and through her very best coal field, crossing the Cumberland river at the mouth of the South Fork, in the midst of the very choicest iron making coals of Kentucky, and her richest lumber and iron ore region, and pushing southward further, it taps the vast coal centre and iron region of Tennessee, Alabama and Georgia at Chattanooga, thus invading the mineral and lumber magazines of the South. This road will drain a belt at least ten miles wide, on either side, for its entire length—it would probably be nearer the mark to say that with its branches

it will drain twenty miles on either side—and the bulk of this trade will go to Cincinnati. Along the trade belt of this road, immigration will swarm. Germans, Irish, Welsh, Scotch, will push southward through Cincinnati, and the products of their labor will reach that city by direct and cheap transportation."

On West Fourth Street, we saw the old residence of Capt. C. F. Hall, the Arctic navigator. It is a very plain structure on the north side of the street, between Main and Walnut. Capt. Hall, during his residence here, established a daily newspaper—the "Penny Press," but like many another newspaper man failed to find the enterprise profitable, and the publication was soon discontinued. A short distance from Capt. Hall's residence was the law-office of Hon. Thomas Corwin, whom none who ever knew him will ever forget. "Tom Corwin," as everybody called him, was the best "stump speaker" in America, and the only one whom Henry Clay confessed to finding a powerful antagonist and had a dread of meeting in debate.

The educational institutions, fire department, news journals, public library, theatres, and other institutions of Cincinnati are equal in excellence to those of any city of its size in the world.

CHAPTER IV.

A Trip Down the River—Burial Place of President Harrison—The Wonders of Mammoth Cave.

At noon on the loveliest day of the season, we proceeded to the public landing to take passage on board the steamer "United States," for Louisville. We arrived at the landing just in season, although it seemed from the great amount of merchandise yet to be carried on board, that we should be detained for hours. Our carriage went sliding sideways down the steep bank, at the imminent risk of overturning into the water, but the driver understood his business too well for that, and we were soon on deck of one of the finest steamers on the river; the work of receiving freight of all sorts went briskly on in the most primitive manner, all being done by the strong arms of men without the aid of machinery, and at the moment announced for leaving, all was completed; the signal was given, the lines cast off, and the steamer started on her trip down the river, with a reasonable prospect of reaching Louisville at an early hour in the evening.

The time made in 1818, by the General Pike, which was then considered an unrivalled specimen of river craft, in coming from Louisville to Cincinnati, a distance of 150 miles, was one day and sixteen hours. The General Lytle, which has since exploded, made the same distance a few years ago, in six hours and fifteen minutes. The steamer

United States makes it every day in seven hours, including the time occupied in eight or ten landings on the way. Formerly the largest boats were only of 200 or 300 tons, while now they have a tonnage of 1,300 to 1,600. Cincinnati is interested in river trade to the extent of about ten millions of dollars annually. Lines of packets run from here to New Orleans, Memphis and other points on the Mississippi. The line to St. Louis has been abandoned, owing to railroad competition, but will probably be restored. There was formerly a line from Cincinnati to the Red River, but this has been withdrawn. Old lines are from time to time dropped and new ones established. The steamboat interest in this country is immense. The total valuation of steamers belonging to the United States, is now seven hundred million dollars. In the West, St. Louis takes the lead, with Cincinnati next. Steam navigation in the West has been attended with many disasters, but these are diminishing every year, owing to the introduction of safety appliances of various kinds.

The river rises here about fifty feet, at some seasons of the year, but in summer is often only two or three feet deep, consequently the passenger packets are constructed for side-wheel or stern-wheel steamers of light draught.

Among the passengers was a large and portly gentleman—a backwoods Yankee—who seemed to be very greatly distressed in mind. If a man has any social qualities worth mentioning, the deck of a steamer is the place of all others to disclose the fact. I formed the opinion that our fellow passen-

ger of avoirdupois extraordinary was the most unsocial being I had ever met, when I observed his curt manner toward those who would have engaged him in conversation and caused him to forget his troubles, at least for the hour. When those so repulsed turned away from him, he approached me, and then I observed that he had two life-preservers on—one about his neck, and the other about his waist—which ornamentation did not enhance his personal attractions, if he had any. The idea of such extraordinary precautions at noon day, on board a staunch steamer upon a river so shallow that the boat could little more than “rub and go,” was simply ridiculous.

“Do you think anything ’ll happen?” he asked in a tone of anxiety, but as I was at a loss to comprehend his meaning, he added—“Anything ’ll bust?” I rather thought not, as the straps about his waist seemed to be quite secure, however I examined them.

“I don’t mean these things—I mean the biler. Is there any immediate danger?” Again I could not see any evidence of peril.

“Ah, I thank you,” said he, breathing a sigh of relief, and the cloud disappeared from his round and rosy face, which now beamed like the rising sun. His mental agony had been the fear that “something would bust,” and the consoling assurance of safety was as prolific of good as any charitable thing could be.

“I always wear these preservers when on the water, for you see accidents might happen—something might bust, and it would be dreadful to be

compelled to leap overboard unprotected, you know." I knew; but notwithstanding my assurances of safety, no sooner did the steamer attempt to make a landing anywhere, and sound her shrilly signal, than my ponderous friend would start to his feet, frantic with alarm, exclaiming—

"There it goes! I knew it would! Beg pardon, I knew you were wrong. Something's bust!" And not till we were on our way again were his fears quieted. During the entire trip, something was going to "bust," or had "busted."

The view from the steamer's deck is delightful. On the left rise the green hills of Kentucky, at whose base are giant trees skirting the shore and half concealing the fishermen's cabins, and on the right are extensive vineyards which promise purple clusters in great abundance.

On the Ohio shore, in an old neglected cemetery, is the grave of President Harrison, with neither monument nor headstone, and overgrown with rank verdure. Surely such neglect is very far from being creditable to a great people whom the old hero and patriot long served so nobly and so well. A suitable monument upon the spot would attract the eye and win a tribute from the thousands who pass up and down the river.

The next day after our arrival at Louisville, we directed our course to the locality of the Mammoth Cave, which we explored as thousands from both sides of the water do every summer, as hundreds of thousands have done, to wonder at its immensity and its features.

On the border of an unproductive tract of land

known as the Barrens, in the southwestern part of Kentucky, upon Green River, in a corner of Edmonson County, about one hundred miles from Louisville and sixty from Harrodsburg Springs, gapes the gloomy door of the largest underground territory in the world.

It contains, according to the best authorities, two hundred and twenty-six avenues, forty-seven domes, numerous rivers, eight cataracts, and twenty-three pits. The aggregate length of the various corridors is estimated at several hundred miles. Those who propose a journey thither must be prepared for "rough, uneven ways, that draw out the miles and make them wearisome;" the Barrens being simply a vast reach of rolling knobs and hills, once bare and profitless prairies, but now overgrown by dwarf oaks and beeches, together with such vines and shrubs as are capable of rooting themselves in baked and dewless earth.

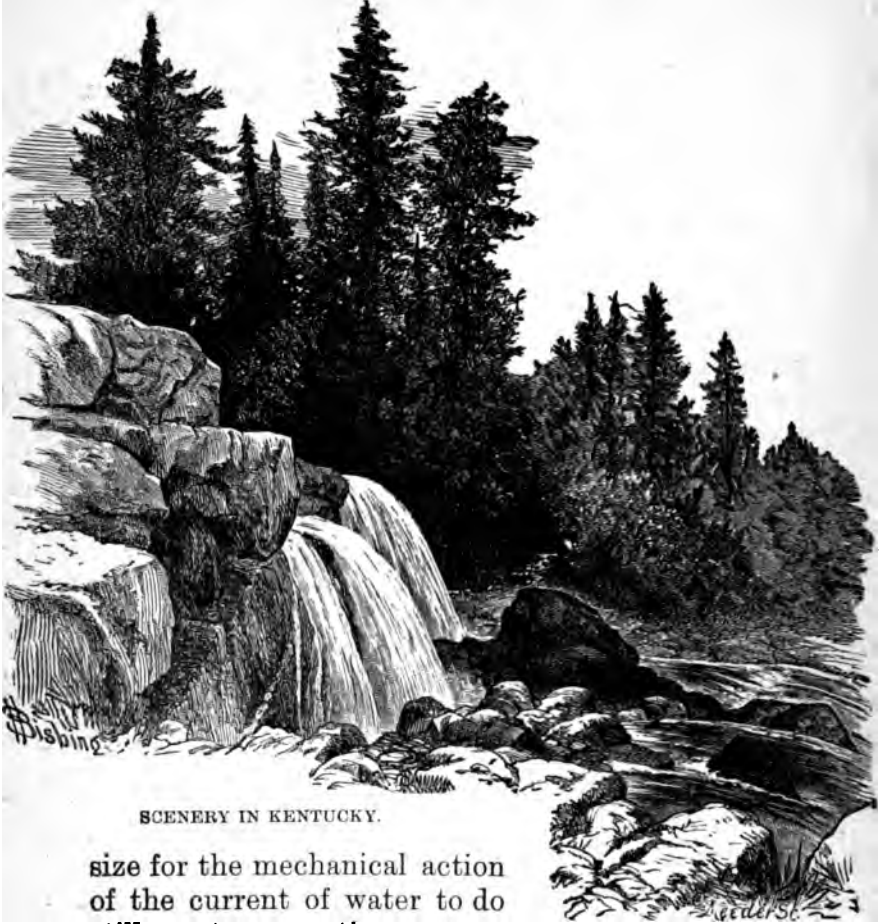
In the immediate neighborhood of the cave a more agreeable aspect of things is presented—green park-like openings—also patches of fine wood-land, hickory, chestnut, and elm; and in Cave Hollow, a ravine widening into a delightful valley, the scenery becomes exceedingly beautiful.

This valley is bounded by rocky walls, capped with sand stone, precipitous in parts, in parts piled in loose masses, along the base of which grow walnuts, catalpas, pawpaws, and maples; while rooted among the rocks, and clambering over them, are weeds, brambles, and flowers, of brilliant colors and wild luxuriance of growth.

Mammoth Cave was discovered by a hunter in

1809, and two years later saltpetre works were established within it. The war of 1812 cut off the foreign supply of this article and increased the demand in this country; business within the cave was very brisk until the close of the war, when the works were abandoned.

It is believed that the formation of the Cave was due to the chemical and mechanical action of water upon certain earthy substances below the surface. Limestone, chemically known as carbonate of lime, through which the whole course of the cave is located, is insoluble in pure water, but is soluble to a degree in water charged with carbonic acid gas. Every one is familiar with the phenomena of hill-side springs, and is aware of the fact that these springs are produced by small streams of water flowing through the crevices of rock and finding an outlet. Imagine such a stream flowing through a hill composed of salt, sugar or some other readily soluble material, and it will be seen that it would quickly form for itself a channel of considerable magnitude. If in addition to the solvent action of the water, the channel thus formed should become the bed of a rapid stream, the mechanical effect of the water would greatly increase and otherwise modify the result. If this stream instead of passing through a very soluble material, were to pass through one that was soluble only to a very slight extent, the final result would be the same, but it would require a longer time. Such is the case with the cave. The constant trickling of water strongly impregnated with carbonic acid gas through the crevices of the rock, gradually wore for itself a channel of sufficient



size for the mechanical action of the current of water to do still greater execution.

The Mammoth Cave is the dry bed of what was once a great subterranean river. Imagine a rocky river with all its branches, its narrow places, where the water flows swiftly; its broad, deep places where the water has a more gentle current; that from some cause the river had been drained, and you

have an idea of the appearance of the cave when it ceased to be the bed of a flowing stream, and as a large portion of it appears at the present time. There is a striking resemblance of portions of this dry river bed to Green River, of which it was evidently once a part and with which it even now communicates.

The upper portions of the cave were first formed, and as by the gradual lowering of the bed of Green River, these became dry, the lower parts were formed, and are being formed. The changes that have occurred within the cave since it ceased to be the bed of a flowing stream are chiefly due to chemical action, in the formation of the pendants and columns termed stalactites and stalagmites, and the exquisitely beautiful crystalizations of sulphate of lime or gypsum which occur in some parts of the cave, and also to the falling of huge masses of rock from the walls and roof. Some of the rocks evidently fell while the water still flowed through its avenues, as the rocks themselves and the greater masses from which these were detached are worn smooth by the action of the water. Other rocks have fallen since and are unmarked by water. The terminus of the main cave is formed by the falling of rocks from the roof that have entirely obstructed the passage.

Stalactites are pendants from the roof, resembling an icicle. The earth forming the roof serves as a filter for the water, which slowly falls in drops, and which being impregnated with carbonic acid, dissolves a quantity of the lime in its passage through it. As it hangs, a part of the acid being gaseous,

escapes, and a corresponding portion of carbonate of lime is deposited. In the formation of stalactites, it is necessary that the water should drop very slowly; a stream, however small, would utterly prevent the formation. Stalagmites are exactly the reverse of stalactites in their position; they attain a greater or lesser height, according to the quantity of carbonate of lime which falls. These are formed where water, dropping very slowly from above, remains for a short time upon the floor ere it flows away. In composition they are identical, and are often formed simultaneously, the same drop imparting a portion of its substance to both. It will be seen, therefore, that the process is a very slow one.

There are stalactite columns in Mammoth Cave said to be thirty feet in circumference, that must have been formed as above described—first a minute particle, then a pendant rod, then a pillar of great proportions. The mind is bewildered in endeavoring to conceive the duration of time necessary for the growth of such a mass in such a manner; and no reasoning being can look upon one of these ancient columns, and watch the little drop of water that is falling in just the same measured rate that other drops have been falling for thousands of years, and not realize the insignificance of the duration of human life, and the instability of the works of man, compared with these works of Nature and the period of their formation. Since the first drop fell, nations have risen, attained their prime and passed away; the Mound Builders may have wondered at the spectacle and vainly sought to compute the time when the first formative process began; wars have

desolated the fairest lands; man has plodded on his way from the cradle to the tomb, loving, hating, sorrowing and rejoicing; the most wonderful changes have occurred in the history of earth, and all the ages, the centuries and milleniums of time requisite for all these in Nature's laboratory has been forming the wondrous creation—the stalactites and stalagmites of this vast cavern; drop after drop, the work has proceeded, until it has built a monument for time more wonderful than the pyramids.

During the summer, the air constantly flows out of the cave; during the winter it flows in,—the phenomena being due to the difference in temperature between the external and internal atmosphere. A quarter of a mile from the mouth of the cave, the temperature is ever the same, the thermometer constantly standing at 59 degrees. Within the cave, everything is changeless. Summer and winter, day and night come and go, but give no indications of change. The air is remarkably pure, with a lesser proportion of carbonic acid gas than that of the surrounding country.

The entrance to the cave is about a quarter of a mile from the hotel, and is reached by passing along a little, wild, rocky foot-path only wide enough in some places for a person to pass, across bridges, down steps built of wood or cut in the rock, through dense timber and luxuriant vegetation that overhang and shade the path. Altogether it is wild and romantic enough to satisfy the most ardent admirer of nature. It may be supposed that a path trodden by two or three thousand persons every

season for many years, would be worn broad and smooth, or at least that the undergrowth would be cut away, but it remains in its primitive wildness, and a casual observer would imagine it but a rustic way for a few country farmers.

Having arrived at the entrance of the cave, the guard furnished us with lighted lamps, which on first entering, seemed wholly insufficient for the purpose designed, but after a short time our eyes became accustomed to the dim light, and objects were plainly discernable. As we proceeded, the roof of the cave became lower, and for some distance it was only seven feet in height. Through this part, the saltpetre miners had collected the loose stones that encumbered the route, and used them in the erection of a wall on each side, leaving but a narrow passage-way—the “Narrows”—at the termination of which there are two passages leading in different directions. Here is the Rotunda, one hundred and seventy-five feet broad and one hundred feet high,—an immense room, nearly circular with a dome-like ceiling of a single piece of gray stone, on which hang bats in great numbers. The guide lighted oiled paper, and we were thus enabled to see the dome, which receded almost beyond the reach of vision. On either side, a dark, mysterious opening indicated the entrances to other galleries.

The floor of the Rotunda was cumbered with the remains of the wood-work used by the saltpetre miners, and altogether presented a desolate and wierd appearance.

On the right of the Rotunda is Audubon's avenue,

which extends about half a mile, and terminates in a group of stalactites. Taking the left hand opening, we again entered the main cave, which is here about sixty feet wide and forty feet high. Along the center were the vats used by the miners. All the timber connected with these is remarkably sound. The attention of the visitor is next directed to the Cliffs of Kentucky River, a large overhanging wall of rock said to resemble those cliffs. After passing the Pigeon Boxes,—little niches in the wall, the passage extends to the width of eighty feet. The "Methodist Church" is next seen, the pulpit rock being twenty-five feet high. Religious services have been held here. Near this is the Water Clock—a spring in the wall, that keeps a constant dropping of water into a pool below, with the regularity of the ticking of a clock. A little further on we ascended a flight of steps and entered the Gothic Arcade. The first object that there attracts the attention is a solitary large stalactite, curiously gnarled and knotted, and called the Post Oak. The passage is about forty feet wide, and from eight to sixteen feet high. The ceiling is flat and of a grayish color.

A portion of the Gothic Arcade is called the Register Room—from the names of visitors inscribed upon its walls. The patent-medicine man has been here before us, for there is the inscription "Take—Bitters," beneath which, some irreverent wag has written, "And prepare for death."

The Register room leads to the Gothic Chapel. This is a room of considerable extent in which there are many stalactites of great size. The room is grand and beautiful.

In the vicinity of Gothic Chapel is the Blacksmith Shop—so called from the number of small black stalagmites which cover the floor. Near by is "Bonaparte's Breastworks," a long ledge of rock that has been separated from the wall and has the appearance of newly erected breastworks. A little beyond this is the "Old Arm Chair," which consists of a mass of stalactites and stalagmites having, by a little stretch of the imagination, the outlines of a very comfortable chair. The back is a little stiff, and the seat not at all inviting, but the traveler must not be too fastidious. On the left is a curious stalagmite, formed by the dropping of water upon a projecting point of rock called the "Elephant's Head." A stalactite forms the trunk, but elephant's above and below ground are quite unlike in appearance.

On the right, a point of rock jutting out sixteen feet over the brink of a dark pit seventy feet deep, is known as "Lover's Leap." The fool has yet to arrive who will perform the exploit of leaping into it. A narrow, winding crevice in the rock, twenty feet long and fifty feet high, and with a steep declivity, is called "Elbow Crevice," as it is too narrow for elbow room. "Napoleon's Dome" is formed by a concave rock overhead, fifty feet high and thirty in diameter. Wherever these domes are found, corresponding cavities are found beneath them. Directly below the "Blacksmith Shop" is the "Cinder Pile," a collection of the same black stalagmites seen in the upper room; these rest upon a bed of mud. In immediate proximity to the Cinder Pile is Lake Purity—a shallow pool of clear and

pure water. The Arcade extends half a mile further—its length being a mile and a half; at the terminus is a dome and a cascade.

We now retraced our steps and re-entered the main cave—arriving at the “Grand Arch.” Passing under a long archway we came to immense masses of rock, standing on edge as they had fallen from above and unpleasantly suggestive as we glanced from them to the roof and observed other prodigious rocks, securely or insecurely imbedded in the earth, only waiting for that other little drop of water to send them thundering down. The floor in which the fallen rocks, from eight to ten feet high, are firmly cemented, was formerly soft mud, but this has now become as hard as the rocks themselves. The prints of the hoofs of the oxen that were formerly used in the cave, the wheel tracks and other marks are as distinct as if made but yesterday; so will they remain for all time.

Upon the right is the “Giant’s Coffin,” forty feet long, eight feet high, one solid piece of gray rock, having the shape of a coffin. The visitor experiences a sense of awe and sublimity in gazing upon this wonderful formation. It rests upon an elevated stand; the weird appearance of surrounding objects by the dim light of lamps, illuminating a little space in the thick darkness, the utter silence, broken only by the flitting of bats or the falling of grains of sand, the massive walls of rock that closed us in, all were most impressive.

At this point we again left the main cave. Passing around the foot of the “Coffin” and up the other side, we entered a very narrow aperture in

the rock which led to the "Deserted Chamber" and thence into the "Wooden-bowl Cave." It is said that the first white man who ever entered the latter cave found therein a wooden bowl.

In one of the halls several mummies were long ago found among the recesses of the rock, and a curious piece of bark-matting, the relic of some Indian Queen, perhaps, is still shown. The bodies seemed to have undergone no process of embalming, but were nevertheless, in a perfect state of preservation; so dry is the air, and so strongly impregnated with nitre, as to prevent decomposition. What has been done with these mummies, I have been unable to ascertain with any certainty. One is reported to be in the British Museum, and another to have been burned up in the Museum at Cincinnati.

An elaborate description of one of these ancient sleepers has been published by a scientific gentleman who visited the cave in 1813, from which the subjoined is an abridgment: In digging saltpetre earth, a flat rock was met with by the workmen, a little below the earth's surface; this stone was raised, and was about four feet wide and as many long; beneath it was a square excavation about three feet deep, and as many in length and width. In this small subterranean chamber sat in solemn silence one of the human species, a female, with her wardrobe and ornaments placed at her side. The body was in perfect preservation, and sitting erect; the arms were folded up, the hands laid across the bosom, and the wrists were tied together with a small cord; around the body were wrapped two deer-skins. These skins appeared to have been dressed

by some mode with which the present generation is unacquainted. The hair of the skins was cut off near the surface, and the skins ornamented with the imprints of vines and leaves, sketched in a substance perfectly white. Outside of this wrapping was a large square sheet, either woven or knit. The fabric was the inner bark of a tree, supposed to be the lime-tree. In its texture and appearance it resembled the South Sea Islands matting; this sheet enveloped the whole body. The hair on the head was cut off within an eighth of an inch of the skin, except near the neck, where it was an inch long; it was in color a dark red. The teeth were white and perfect, and no blemish on the body, except a wound between the ribs near the back-bone, and an injury in one of the eyes. The finger and the toe nails were perfect, and quite long; the features were regular. The length of the bones of the arm, from the elbow to the wrist joint, was ten-and-a-half inches. The whole frame gave evidence of a figure five feet and ten inches in height. At the time it was discovered, the body weighed but fourteen pounds, and was perfectly dry; but on being exposed to the atmosphere, it gained in weight, by absorbing dampness, four pounds.

It has been thought curious that so large a body should weigh so little, as many human skeletons of nothing but bone, exceed this weight. Recently, however, some experiments made in Paris, have demonstrated the fact of the human body being reduced to ten pounds, by being exposed to a heated atmosphere for a long period of time. The color of the skin was dark, not black, and the flesh hard and dry upon the bones.

At the side of the body lay a pair of moccasins, a knapsack, and a reticule. The moccasins were made of wove or knit bark, like the wrapper I have described; around the top was a border for strength and ornament. These denoted feet of small size, and differed but little in shape from the moccasins worn by the Northern Indians. The knapsack was of wove, or knit bark, with a deep, strong border around the top, and was about the size of the knapsacks used by soldiers. The workmanship was neat, and the fabric such as would do credit to a manufacturer of the present day. The reticule was also made of woven bark, in shape like a horseman's valise, and opening its full length on the top; the whole laced up and secured by a cord which passed through loops attached to either side. The edges of the top were strengthened by deep, fancy borders. The articles contained in the reticule and knapsack were as follows: one head-cap, made of woven or knit bark, without border, and of the shape of the plainest night-cap; seven head-dresses, made of the quills of large birds, and put together after the manner of fans, somewhat enabling the wearer to present a beautiful display of feathers. These are represented as very splendid; they would, it is said, form magnificent ornaments for the female head at the present day. Several hundred strings of beads, consisting of hard seeds, smaller than hemp-seeds. They were of a brown color, strung on three-twined thread, and tied up in bunches as strings of coral beads are tied up by merchants. The red hoofs of fawns on a string, supposed to have been worn as a necklace. They were about

twenty in number, and were thought to have been emblematic of innocence. The claw of an eagle, with a cord passed through it, so as to form a pendant for the neck. The jaw of a bear, designed to be worn in the same manner. Two rattlesnake skins; one of these had fourteen rattles; they were neatly folded up. Some vegetable colors done up in leaves. A small bunch of deer sinews. Several bunches of white thread and twine. Seven needles, some of which were of horn, and some of bone; they were smooth, and appeared to have been much used. The top of one of these needles was handsomely scalloped, but none of them had any eyelets to receive the thread. A hand-piece, made of deer-skin, and designed to protect the hand in the use of the needles, instead of a thimble. Two whistles, about eight inches long, and made of cane.

In the various articles which constituted the ornaments of the mummy, there were no metallic substances; and in the make of her dress there was no evidence of the use of other machinery than the bone and horn needles. No warlike arms were found among the collection.

Of the race to which she belonged, we can know nothing; and as to conjecture, the reader of this account can judge for himself. The cause of the preservation of the body, ornaments, and dress, is owing to the nitrate of lime that impregnates the atmosphere of the cave, and the entire absence of moisture and heat. There is no such thing as putrefaction or decomposition possible in the cave.

The features of this exhumed member of the human family much resembled those of a tall, handsome American woman.

A narrow aperture on the right admits the visitor to a very steep and insecure flight of steps, known as the "Steps of Time," just beyond which flows a pure spring. Passing from this the party proceeded through a long passage, the roof of which forms a double arch, smooth and as white as if it had been newly lime-washed.

On the right is a pit, nearly a hundred feet deep, and twenty feet across. The light from the burning oiled paper which the guide held, gave a view of the rugged outlines of the place, and another burning paper being thrown into the pit, the blackened walls of the gaping chasm could be seen for the entire depth. "Minerva's Dome" on the left is fifty feet high and ten feet wide. Near this place is the "Bottomless Pit." To the first break in the descent, the distance is one hundred feet, then there is a gentle incline and the pit extends to a depth of seventy-five feet further, as frightful a chasm as can well be imagined. Immediately over the "Bottomless Pit" is Shelby's Dome, which is sixty feet in height. From the "Hall" on the other side of the Bottomless Pit, Pensacola Avenue extends for nearly a mile. The chief objects of interest along the avenue are the "Sea Turtle"—a mass of rock that has fallen from the roof; "Snowball Arched Way," "Mat's Arcade," with four terraces between the floor and roof, extending the entire length of the arcade; a clump of stalactites called "Pine Apple Bush," and Angelica's Grotto, which is really beautiful, as its walls are covered with white crystals.

On re-entering the "Deserted Chamber" the party

descended another flight of steps and entered the "Labyrinth," a curious winding passage through the rocks. Ascending a few steps, we came out on a small landing, upon one side of which was an irregular aperture, through which the party looked, in accordance with the instructions of the guide, who now disappeared, on his way to the opposite side to light his oiled paper. The dim light of the lamps revealed an immense void—no top, no bottom, no limit—nothing but impenetrable darkness. It is impossible to describe the sensation of wonder and awe which was experienced. A moment later, however, a bright light flashed above, and we were thus enabled to distinguish a vast dome, two hundred feet high and sixty feet wide. The aperture through which the party looked, is situated midway between the top and bottom. Water was constantly dropping from the upper part of the dome and falling upon the rocks below. Small stalagmites studded the bottom. The opposite wall resembled an immense curtain, hanging in loose, graceful folds.

Again entering the main cave at the "Giant's Coffin," the party continued their explorations. Three-quarters of a mile from the entrance, the cave bends at an acute angle, not far from which are several stone houses, built nearly thirty years ago as resorts for consumptives. A greater folly than such an undertaking there could not be. Of course human beings require the sunlight and will languish and die without it, and of course the experiment was soon abandoned. One of these is now appropriated for a registry room.

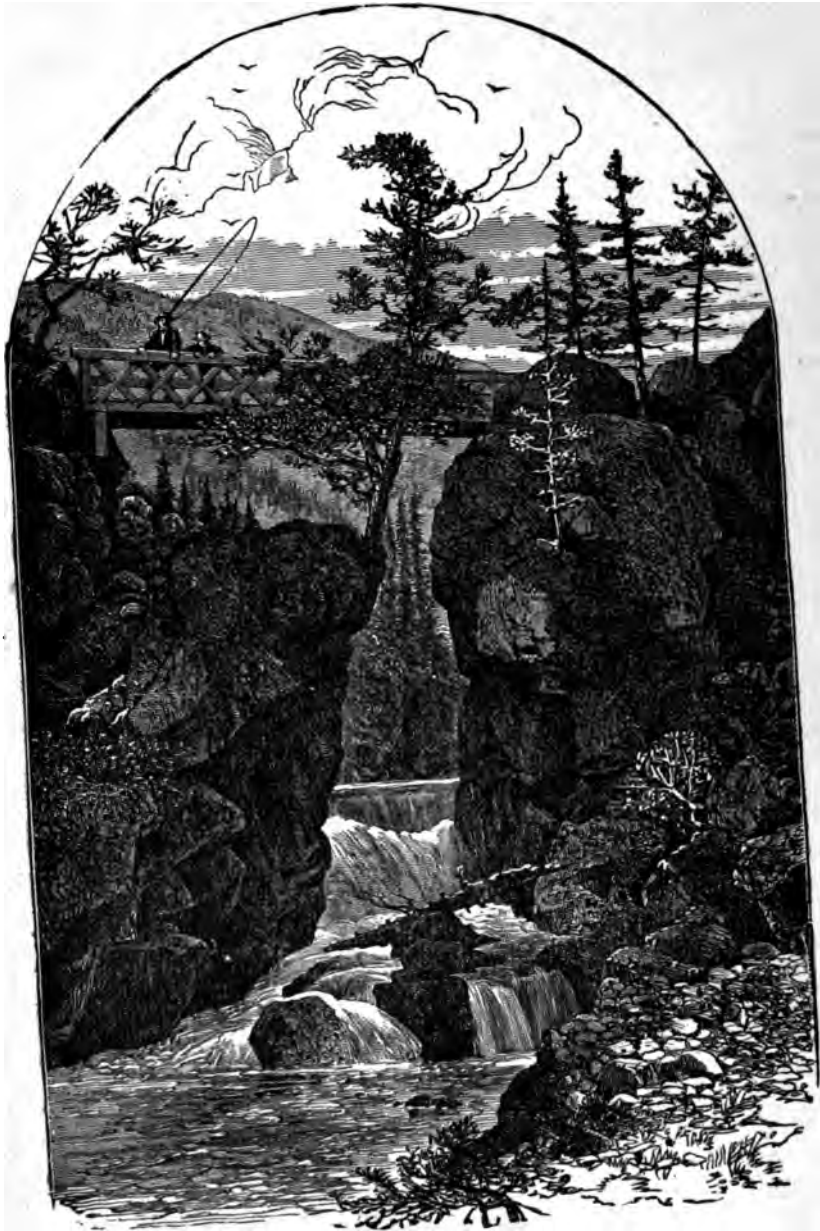
A little further on the party arrived at the "Star Chamber," one of the most interesting places in the cave. It is a room seventy-five feet high and fifty feet broad; the roof of which is covered with a layer of black gypsum. A glance upward seemingly enabled us to see the starry firmament. It was a grand optical illusion. The roof had the appearance of the sky at night, studded with innumerable stars, forming groups and constellations; light, fleecy clouds seemed to float over a part of the heavens, partially veiling some of the stars. The rocky walls did not in the least diminish the effect, they but served to render the scene more wild and weird, more wonderful. It seemed as if we had emerged from the cave and entered some rocky pass or deep canyon at midnight. Seating ourselves and giving up to the guide the torches we had carried, he went to the opposite side and disappeared from sight behind a jutting ledge of rock; the light which he held unseen to us, shone upon the canopy rendering the illusion complete. "Sometimes," said the guide from his hiding place, "a storm comes, and hides the stars;" saying this, he gradually withdrew the lights, causing a dark and heavy shadow to creep up the opposite wall and across the sky, enveloping all things with utter darkness. Bringing the lamps nearer, the deep gloom vanished and the stars shone as clearly as before. Again the experiment was repeated; all was blackest night—not a single ray relieved the gloom. We were breathless. What if a fatal accident should occur to our guide! There was the silence of death, the dense darkness of the grave,

that was almost palpable—a silence and darkness painful to the senses. In such rayless night and perfect stillness, persons have been lost within this cave, and with only the flitting bat for company, and with the mocking echoes of the cave to answer their piteous cries, little wonder that in such cases insanity has quickly ensued.

The guide approached with the lighted torch. How welcome was the light—even one so poor as this! It is worth a trip to the cave to learn to fully appreciate the blessing of light, which too often those esteem so little who have never known its loss.

The cave extends three miles further, terminating in great masses of rock that have fallen from the roof. Immediately adjacent to the Star Chamber is the "Floating Cloud" room, a quarter of a mile long, and of the same height and breadth of the former. The roof presents the appearance of floating clouds, a phenomenon caused by the scaling off, in places, of the black gypsum, uncovering the white sulphate of soda beneath. The stars, seen from the "Star Chamber" are due to the same cause—by the crystalization of this salt through little points in the ceiling. These crystals, when illuminated by the lamp-light, glitter and sparkle like real stars.

Still beyond is "Proctor's Arcade"—a straight channel, one hundred feet wide, forty-five feet high and three-quarters of a mile in extent. This leads to "Wright's Rotunda," a room four hundred feet in diameter and covered with an immense stone, perfectly flat and about forty feet above the floor.



KENTUCKY RIVER AT FRANKFORT.

Beyond this is the "Temple," the floor of which contains two acres of ground, and covered by a dome one hundred feet high. An avenue leads to "Fairy Grotto," a beautiful little stalactite room. The "Black Chamber" is one hundred and fifty feet wide and twenty feet high, entirely lined with black gypsum, which is certainly sombre enough. In this part of the cave are some small cascades.

The next day our party started to explore the "Long Route." Passing the "Bottomless Pit," the visitor enters the "Valley of Humility"—a passage but four feet in height, which brings him to the "Scotchman's Trap," a small, nearly circular opening through which he descends, and over which a three-cornered stone rests, with one of its corners just touching a point of rock on the opposite wall; should this fall, it would obstruct egress from this direction, but there are other routes of escape to the main cave. The trap admits the visitor to a passage a little over three hundred feet long, from four to ten feet wide, and from one to four feet high, along the bottom of which, the water has worn a winding channel three feet deep and nearly two feet wide. It is not the most comfortable thing in life to pass through. I am sure our friend on board the steamer would be obliged to divest himself of his life-preservers to make the passage, and even then I am not quite sure his ever constant fear might not be realized.

"Great Relief" is a good-sized room at the end of the crooked and narrow way, and never was a locality better named. We now arrive at "River Hall," which extends to the river Styx. On the

right is a small, low chamber, the roof of which is cut into various fantastic shapes by the action of water. From this room Sparks' Avenue leads to the "Mammoth Dome." The only objects of note along this avenue are a number of rocks having a perfect resemblance to petrified wood. Mammoth Dome is two hundred and fifty feet high and covers a correspondingly large area. The Corinthian columns, four in number on one side of the "Dome," seem to have been cut out of solid rock. The party pursued their way along "River Hall," which gradually descended, till the floor, which had been dry, became soft and damp.

On the left is the "Dead Sea," a dark, gloomy-looking pit one hundred and fifty yards long, from fifteen to forty yards wide, and filled with water to within forty feet of the top. It occupies nearly the entire avenue; the passage along the right side is only wide enough for two persons to walk side by side, and is inclined, wet and slippery. For a part of the distance an iron railing has been erected to guard visitors from slipping into the "Sea." Like all other waters in the cave, the Dead Sea has connection with Green River, and rises and falls with that stream.

At very high water—Green River sometimes rises to the height of sixty feet—the iron railing on the bank of the "Dead Sea" is entirely submerged. There is a perpetual sound of dripping water, which coming up from the mysterious depths, echoing from the rocks and caverns, while all is utter darkness, serves to intensify the sense of awe, and add to the mystery and gloom. Descending from our position

to within twenty feet of the water, the view was even more impressive than before.

The "River Styx" was next visited. This water was crossed on the Natural Bridge, a grand arch of rock spanning the stream some thirty feet above its surface. Next is seen the "River Lethe," which extends in the direction of the passage for a distance of one or two hundred yards. The waters are motionless, and no sound disturbs the perfect quietude of the scene. The roof of the cave at this place is ninety feet high, and on either side the walls are grand and precipitous. An old boat was called in requisition to ferry the party over. On the other shore, a pistol was discharged by the guide, and the sound was like the crash of thunder; it echoed through the passages, again and again, becoming fainter and fainter till at length it died away.

The "Great Walk" is a continuation of River Hall, and extends from "Lethe" to "Echo River." It is over a quarter of a mile long, and is covered with deep, loose sand. A very moderate rise of Green River causes this to overflow, and opens communication between the Lethe and the Echo Rivers; but the former is perhaps only a pool of back-water left by the latter after a rise, as the cave is lower at that part than the river bed. The roof of the "Great Walk" is forty feet high, and presents the appearance of light floating clouds. At the end of this "walk," Echo River leads off from the main passage through a low arched way, but extends to it again further on, the present river being a mere cut-off from the main channel. The main passage is called "Purgatory," and admits

parties to distant parts of the cave when the water is too high to allow of the trip down Echo River, which was made by our party. At first starting, the roof is quite low, so near the water that even when at its lowest point, travelers are compelled to assume a stooping posture in passing through.

Sometimes the water rises so suddenly as to entirely fill this passage in a few hours. Should the traveler find himself thus entrapped, his only chance of escape is through "Purgatory," which is less affected by a rise in Green River. After proceeding for a short distance through this tunnel, the roof became higher, and the river extended to a width of two hundred feet. A pistol was again discharged, causing a fearful crash, not less than the report of a Parrot gun. It seemed as though each cavity in the rocks gave a separate answer, sending the sound back after it had nearly died away, with redoubled force like heavy thunder.

In this river is found the eyeless fish. It is from four to six inches in length, and though there are marks indicating the position of eyes, these organs are wanting. Another kind of fish, which is sometimes, but rarely found here, possesses eyes, but is destitute of vision. These fishes are occasionally obtained in other waters of the cave. After heavy freshets ordinary fish and frogs come in from Green River. The rat is also an inhabitant of the cave. This animal is much larger than the common species. There is no peculiarity about its eyes, except that they are unusually large. Lizards and bats innumerable, as also a great variety of insects are also dwellers in these subterranean

regions, but vegetable life in any form is never found here.

On landing, the party entered Silliman's Avenue, which is a mile-and-a-half long. At one point there is a cascade of sparkling water that falls from the roof and flows away through the floor; near this is an avenue to "Roaring River," which resembles the one last described. The echo there is even louder, and a cascade at the extremity causes a constant roar. Passing the "Infernal Regions," and a few other places of little interest, we arrive at Rhoda's Avenue, which is said to be the finest in the cave. It leads to "Lucy's Dome," which is three hundred feet high and sixty in diameter. The walls have the appearance of being hung with drapery, and altogether, this "Dome" is one of the most interesting localities in the cave.

The "Pass of El Ghor" has a very singular appearance. It is two miles long, in many places only ten or twenty feet wide, and forty or fifty feet high. It bends in every direction, and the floor is cumbered with huge masses of rock. The round and smooth surfaces, so noticeable in other portions of the cave, are here entirely wanting. Everything was rugged and angular. In places, the floor for long distances is composed wholly of loose rocks over which the visitor must clamber at imminent peril to life or limb. In other parts the shelves of rock extend so far over the track, that great caution is necessary to avoid accidents. Among the objects of special interest to be seen in this "Pass," are the "Hanging Rocks"—immense masses that have become detached and hang over the passage in a

position seemingly ready to fall at a touch. In some places they have sunk so far as to greatly contract the passage. A person of nervous temperament is very liable to feel some misgivings in passing beneath them. It is scarcely probable that they will fall at an early day, as that part of the cave is dry.

Table Rock, the Black Hole of Calcutta, and several other localities received but a hasty glance. Stella's Dome is well worth special attention. Its frost work and crystals are very beautiful, but in nearly all respects it is like Lucy's Dome.

"Martha's Vineyard" is especially interesting. The walls and roof are covered with heavy clusters of black grapes, so closely massed that neither leaves nor stems can be seen. A stalactite about three inches in diameter winds its way down the wall, resembling a grape vine. Of course it is not possible to detach a single cluster or grape, for each is a part of the solid rock. Water continually trickles down the wall keeping the grapes moist, and as they are nearly black, causing them to reflect different tints as if in a stage of ripening.

Near this place is the "Chapel," a beautiful stalactite chamber, adjoining which is a bare room, in the center of which is a grave, seemingly hewn out of the solid rock by human hands. It is called the "Holy Sepulchre."

From Washington Hall—the usual dining place of visitors—extends "Marion's Avenue." It is a mile-and-a-half long, and at its extremity divides into two branches, one of which leads to "Paradise," the other to "Zoe's Grotto." Thus there is

within this great cave "Paradise," "Purgatory," and the "Bottomless Pit." The traveler may take his choice.

"Portia's Parterre" leads off from "Paradise." It is about half a mile long. The walls both here and in "Paradise" are covered with gypsum flowers and other very beautiful crystalizations. We next enter "Snowball Room," the roof of which is only about ten or fifteen feet high, and is thickly dotted over with semi-spherical masses of pure white sulphate of lime, about the size of a six pound shot, and giving the impression that some one had been pelting the roof with snowballs, especially as these balls have the loose, crystalline structure of snow, and sparkled and glittered with the reflection of the torches.

"Mary's Bower" was next visited and found more beautiful than any locality previously seen. This "Bower" is the first room in "Cleveland's Cabinet" which extends for a distance of two miles. It is about forty feet wide, and from ten to fifteen feet high. The floor is level and free from obstructions, a fortunate condition, for in this room dame Nature stores her pretty things. It is the flower garden of the lower world; and as other portions of the cave are reproductions of objects and places seen above ground, so this is a reproduction of a flower garden in which a never-ending crop of snowy whiteness is constantly being produced without the aid of light or moisture—indeed the entire absence of the latter is essential to their formation.

Summer and winter, day and night, the growth goes on uninterruptedly, creating a profusion of love-

liness, constantly falling, and as constantly being reproduced. This is by far the most beautiful portion of the cave. Throughout the entire length of the "Cabinet" the roof and walls are thickly covered with crystalizations of sulphate of lime which have taken the forms of flowers, fruits and vegetables, imitating them more perfectly than could have been done by a skillful sculptor. One very common form is a large six-petaled flower about four inches across, with a large bunch of protruding stamens in the center. But almost every known variety of flowers may be found reproduced in this wonderful formation of rock, often so delicate that they crumble at the touch. Not only are they to be found in such profusion, but they are constantly growing, and as the growth from beneath gradually crowds off the older ones, these fall to the floor, which is literally covered with the fragmentary remains of the crops of ages.

That the crystalizations should have taken place under the circumstances is not remarkable; that they should have assumed various beautiful forms, is not a matter of astonishment to a chemist; but that they should so completely imitate the vegetable forms of the upper world, in all their variations, is certainly calculated to excite wonder and admiration. Were the instances of this imitation exceptional, it might be accounted for on the law of accidental coincidence, similar to that by which the Giant's Coffin was made in such perfect form; but when we consider that these forms are not the exception but the rule—that they occur in endless profusion for a space of two miles, and that scarcely

any form but that of the vegetable kingdom is produced, the hypothesis of accident certainly becomes untenable. The chemist may reason, and the philosopher speculate and assign it to chemical affinity, they but refer the cause back to conditions as incomprehensible as the first.

The evidence of design stands forth plainly discernable through it all, and not to be obscured by all the laws of science and reason that man's ingenuity can devise for veiling it. Every cause that can be adduced refers back at last to one great cause that must be antecedent to them all—the will of the Creator of all things, the Architect and Ruler of the Universe.

"Rose's Bower" is but a continuation of the one last described, and in all respects is quite as beautiful.

Among the points of special interest in the "Cabinet" are the following: The "Cross" is a large crevice in the roof about eight feet long, and intersected near one extremity by another shorter one, forming the perfect figure of a cross. The whole interior of this crevice is lined with flowers.

"Bachus' Glory" is a small room about five feet long and three high, the whole interior of which is lined with grapes of white or yellowish white tint. These by the light of the torches sparkled like precious gems.

A little distance beyond, the character of the passage is widely different from that which had excited so much admiration of the party. The "Rocky Mountains" is one hundred feet high, and composed chiefly of stones of all sizes that had

fallen from the roof. The sides of the mountain are very steep, and the summit can only be reached with the greatest difficulty and danger, but even many ladies accomplish the undertaking, where they are rewarded by the sight of "Cleopatra's Needle"—a small stalagmite about two feet high.

On one side of the mountain is a corresponding depression called "Dismal Hollow." At this point the cave divides into three branches. The one to the right leads to "Sandstone Dome." The central one called "Franklin Avenue," a quarter of a mile in length leads to "Serena's Arbor," a chamber forty feet high and twenty feet wide, the walls of which are covered with stalactite formations. "Crogan's Hall," is the terminus of the cave. It is seventy feet in height, with a smooth floor and smooth arched roof. The walls are covered with stalactites, smooth, white, and much resembling ice. On the right is a pit, one hundred and seventy-five feet deep, called the "Maelstrom," into which streams of water flow from different points causing a peculiar sound. At the further end of the "Hall" the floor and roof meet. Our explorations of the great cave have ended.

CHAPTER V.

Natural Scenery in Kentucky—The Capital of the State—Old Home and Memories of Henry Clay—Indianapolis—The Battle Ground of Tippecanoe—Fort Wayne—An Indian's Saving Bank—First View of the Western Prairies—Peoria—Galena—Life Underground.

Throughout the limestone region of Kentucky are numerous caverns of greater or less extent, several of which we visited. Though differing widely



in general features, all present the most beautiful concretions, stalactites, stalagmites, and crystalizations, such as rewarded our explorations in Mammoth Cave. Proctor's Cave in Kentucky, which has been explored for several miles, and Wyandotte Cave, near Corydon, Indiana, are especially interesting, but our limited

time did not allow of a complete exploration of either.

The natural scenery in many parts of Kentucky

is remarkably picturesque, wild and beautiful, and affords excellent subjects for the artist's pencil. The route we had chosen for our return to Cincinnati led us to the lovely little city of Frankfort—the capital of the State—which we could not pass without pausing to admire the natural beauties of the locality. The city is environed by hills crowned with forest trees and verdure, and through it flows the beautiful Kentucky River, spanned by a little rustic bridge from which we had a view of the charming scenery.

The river, which at this point is very narrow, winds its way among the hills,—now hidden from view by projecting cliffs, and again seen in the distance, appearing like a silver cord upon a ground of emerald, as the setting sun cast his last rays upon the unruffled surface.

Upon a high bluff overlooking the river, a locality especially lovely—is an old cemetery—the burial place of several of the Governors of the State, and also of the famous Daniel Boone. There are also tablets and costly monuments and obelisks marking the resting places of the honored dead, but there was none of all these that had for me the deep interest of the mounds, ranged side by side, of Kentucky's noble sons who yielded up their lives in their devotion to their country's cause. An emerald mantle covers them, in which are woven by Nature's deft and lavish hand, little flowerets that treasure up the tears of night for heroes fallen.

Though the effacing hand of time may obliterate the memorials of marble tablets, and crumble into dust, the monuments that stand so stately, challeng-

ing the passer-by to read of virtues those possessed whom they commemorate, green forever be the memory of those gallant men, in whatever State their home, in whatever ground they lie, who at their country's call gave up their lives in valiant service for her!

Leaving Frankfort by the evening train, we soon arrived in Lexington, the old home of Kentucky's favorite son—the Nation's rather—the home of Henry Clay.

With what reverence and what pride do we speak the names of Clay, of Webster, Benton, Crittenden, Chase, Douglass, Sumner, Wilson, Lincoln, and others of the bright galaxy whose fame is immortal! They lived for their country. Her glory, her greatness and her fame was their ambition and their pride. Upon whom, in our age, will their mantles fall?

There is something both sad and sweet in the memories clustering round the homes of departed heroes—the ideals of the people. This is especially so of a man like Henry Clay, who was personally beloved by the people of Kentucky to an extent that seems almost marvelous. No other public man of his time, not even Quincy, Randolph or Calhoun—his great rivals for forensic honors—enjoyed as he did, the unbounded love and esteem of his constituents, each of whom thought and spoke of Mr. Clay as his personal friend—a friend to be revered.

I visited Ashland, the former home for many years of the great statesman. It is situated on the road leading south from Lexington, distant about a mile-

and-a-half from the court-house. As I entered the gate and walked up the shaded road-way which leads to the house, I felt that I was treading upon sacred ground. The original Ashland estate, when Mr. Clay bought it in 1805, consisted of 650 acres, but after his death it was divided. The old house has been demolished and given place to another, built, however, from the same architectural designs. The "negro quarters" of Mr. Clay's servants are still standing.

At his Ashland home, Mr. Clay received his neighbors and his distinguished company, with the same generous hospitality. He often entertained the leading men of the time, and among his visitors were Daniel Webster, Count Bertrand, the French minister, Mr. Palitica, the Russian ambassador, Lafayette, President Monroe, Lord Morpeth and many others, who came great distances to see him and enjoy his hospitality. Every great man has, in a certain sense, a dual character. As a public man, he is constantly on his guard, lest he betray some weakness of his nature, or afford opportunities for jealous minds to censure and condemn; in his private and social relations, he is but a man among men. In the latter relation, Mr. Clay was as successful in winning golden opinions of his neighbors, as he was in public life—in the senate and in popular assemblages. He charmed every one with whom he held any intercourse, by his kindly and hospitable manner. While all felt that they were in the presence of a superior intelligence, yet his pleasing manners never failed to invite confidence, and hence his social parties were always delightful.

In the beautiful cemetery of Lexington is a monument to his memory. It is 120 feet in height, and is surmounted by a statue which has been pronounced a perfect semblance of the great statesman, whose body reposes within the crypt at the base of the monument.

The corner-stone was laid July 4, 1857, and the structure, which is of gray lime-stone, was finished two years later, and formally dedicated with the most imposing ceremonies July 4, 1860, in the presence of an immense concourse of persons, hundreds of whom came from distant states.

With the purpose of seeing several other points east of the Mississippi—which aside from the great interest they possess for every tourist, as evidences of the wonderful growth and prosperity of our country, are also rich in historical associations—three of us proceeded to Indiana, while the other members of our party departed for St. Louis, to complete the most important preliminaries for the continuation of our trip, viz., to charter a steamer of light draught, in which we proposed to visit some of the navigable waters of the Far West; for the delay which had been occasioned by the failure of the two English gentlemen to arrive at the appointed time, had deprived us of the opportunity of proceeding in a government steamer that was to convey supplies to several of the western forts, in which we had expected to take passage.

The first point of destination of the former party was to Lafayette, Indiana. Stopping over for a few hours in Indianapolis, the State Capital, and taking hasty glances at the beautiful city, I was not a lit-

tle amused by the expressions of astonishment of one of our English companions, Mr. Barstow, whose geography and history both, concerning the United States, were somewhat out of joint. He had graduated at one of the best colleges it is true, but this was his first visit to this country, and his astonishment was unbounded on learning that but fifty years ago the site of this delightful city was the undisputed territory of the red man,—that their council fires had been kindled and their pow-wows held upon the very spot whereon the capitol stands to-day; that men are now living in the city who well remember its first settlement and the difficulties and perils experienced by the early settlers, in their efforts to establish homes for themselves in this then “Far West”—regions which have since so far receded.

Mr. Warrington, the second of our English friends, obtained credit for a better knowledge of the New World by his silence, but it was very evident that he was quite as much amazed by what he saw as was his more out-spoken companion.

A ride of sixty-six miles brought us to Lafayette. This thriving and beautiful city is situated on the left bank of the Wabash River, and is in all respects as enterprising as any city in the State. The first American settlement of the place was made in 1823—four years later than the period of settlement of Indianapolis. Among the chief objects of interest in the city is an artesian mineral well, of the depth of 230 feet, of the wonderful healing properties of which the reader is as well informed as myself. If medicines are efficacious in proportion to the

degree of their disagreeable taste—which it would seem that some physicians believe—these waters must be super-excellent, and the sound health of our party is assured from this onward, to the end of our lives. I say this, however, in confidence and in parenthesis, that the good people of Lafayette may not think us ungrateful for the many courtesies extended by them. The Wabash Canal affords communication with the Ohio and with Lake Erie, and vast quantities of grain thus find transportation to the great markets of the world.

Seven miles distant from the city is the old battleground of Tippecanoe, to which we paid a visit, and in doing so, passed through a most fertile and highly cultivated region of country. This spot of ground was, in 1811, the theater of the most desperate fighting between the Indians and the brave soldiers under command of General Harrison. It was the last grand struggle of the Miami Confederacy to repel the advance of civilization, upon which the most momentous results depended. If the Indians were defeated, farewell to their hopes of ever driving the white man from the beautiful country they had entered, and which they would then forever possess; if victorious, the graves of their fathers and their fair hunting-grounds would be safe to them and their children—the white man would flee in terror, never more to return, and the smoke from their wigwams in these favorite regions would ascend to the skies for all future time. Tecumseh led the warriors to battle. He was a host in himself. Enjoying the fullest confidence of the “braves” whom he led, and believing himself invincible, he and his

followers rushed madly to the conflict. No chieftain of all the Confederacy was better qualified than he to give battle to the pale faces.

General Harrison, who was an expert and valiant Indian fighter, knew well the foe with whom he had to deal, and did not under-rate the prowess and cunning of the enemy. Never was there a more determined and deadly contest between savagery and civilization. Furiously, like the whirl-wind rushed the Red men; with tomahawks and scalping-knives uplifted—hand-to-hand they fought; the savages heeding not the galling fire that covered the ground with the dead and dying, but with hideous yells and the fury of demons, sought to avenge the slain. At length the chieftain, Tecumseh himself, fell, and by his fall the Indian confederacy was broken and the savages scattered in all directions, never afterwards daring to molest the settlers who came hither to take possession of their lands.

Fort Wayne was our next point of destination. This enterprising city is situated at the confluence of the St. Mary's and St. Joseph's Rivers. These waters uniting form the Maumee. Fort Wayne, now so flourishing and prosperous, with its fine hotels, elegant public buildings and private residences, its machine-shops and factories, its many churches, schools and news journals, and other concomitants of a fine city, had in its infancy a hard struggle for existence.

In 1794, General Wayne here erected a fort, the ruins of which may yet be seen. So far was it beyond the bounds of civilization, that nobody deemed it either safe or profitable to penetrate so far west-

ward. Even the most restless Yankee farmer, who contemplated a removal to the "Far West," never dreamed of going further than Ohio, which was so very far away, but as for going to Indiana, that would be "flying directly into the face and eyes of Providence"—a thought never to be entertained by prudent people—so for a period of fifteen years Ft. Wayne was merely a military post. The territory was solely inhabited by roaming savages, who regarded with great dissatisfaction and apprehension the presence of armed white men within their precincts; fearing still further encroachments upon their hunting grounds in the future, they resolved upon the destruction of the garrison. Their fears were confirmed when settlers began to arrive, and construct their homes in the vicinity of the "big thunder," as they called the fort.

On a dark night in the year 1812, the Indians in great numbers approached the fort under cover of the trees, and thick underbrush, which grew near it, and from their ambush, began an assault upon it, at the same moment applying the torch to the houses of the little village,—all of which were laid in ashes, and the terror-stricken settlers, who could not save themselves by flight were massacred. The fort was saved from destruction by the timely arrival of General Harrison and his forces.

In 1815, a promising little settlement was established upon the site of the present city. In those early days the approach to Ft. Wayne was by flat boats, by the St. Mary's and by the Maumee Rivers. This means of communication continued until 1838, when it was terminated by the construction of mill

dams, needful for the growth of the town. Indians, hunters, and game, all made their way still further westward. One Indian Chief, who had accumulated nearly a quarter of a million of dollars,—an unprecedented instance of Indian economy—deposited his savings in a bank, but as it was only a bank of earth, with no further securities than the forest trees, the money was discovered after the chieftain's death, and duly appropriated, I believe, by the white men who found it.

Pursuing our way Westward into Illinois, the desire of our English companions to see a vast prairie was gratified. There are portions of the State even now, thickly settled as it is, where broad prairies in their primitive condition produce only luxuriant verdure.

For miles around the locality in which we were, level and rolling prairie lands extended. Rank grass and an almost endless variety of beautiful flowers covered the plain, and as the gentle breath of summer swept over the vast tract, old ocean was indeed typified; there were the graceful undulations with passing zephyrs, and the long groundswells with the stronger breeze. Thousands of acres were thus clothed with herbage, and millions of flowers in endless variety exhaled their sweetness on the air, but for miles around there was not a single tree, except upon the site of the settlement, where the land became gradually elevated, and upon which grew in variety, a large and beautiful grove of forest trees, the wide-spreading branches of which form a pleasant shade in summer, and serve to moderate the severity of the winds and storms of winter.

The broad expanse soon wearies the eye by its monotony after the novelty of the sight has worn off. The Indians and buffaloes that once traversed these plains have long since gone to the land of the setting sun.

"The want of variety, which is ordinarily essential to landscape attraction, is more than compensated for in the prairie scenery, as in that of the boundless ocean, by the impressive qualities of immensity and power," says Appleton's American Travel. "Far as the most searching eye can reach, the great unvarying plain rolls on; its sublime grandeur softened, but not weakened, by the occasional groups of trees in its midst, or by the forests on its verge, or by the countless flowers everywhere upon its surface. The prairies abound in game. The prairie duck, sometimes but improperly called grouse, are most abundant in September and October, when large numbers are annually taken.

"Perhaps the most striking picture of the prairie country is to be found on Grand Prairie. Its gently undulating plains, profusely decked with flowers of every hue and skirted on all sides by woodland copse, roll on through many long miles with a width varying from one to a dozen or more miles. The uniform level of the prairie region is supposed to result from the deposit of waters by which the land was ages ago covered. The soil is entirely free from stones, and is extremely fertile. The most notable characteristics of the prairies, their destitution of vegetation, excepting in the multitude of rank grasses and flowers, will gradually disappear, since nothing prevents the growth of trees but the

continual fires which sweep over the plains. These prevented, a fine growth of timber soon springs up, and as the wood-lands are thus assisted in encroaching upon and occupying the plains, settlements and habitations will follow, until the prairie tracts are over-run with cities and towns. Excepting the specialty of the prairie, the most interesting landscape scenery of this state is that of the bold acclivitous river shores of the Mississippi, the Ohio and Illinois Rivers."

A few hours in Springfield, the State Capital, enabled us to visit the former home and last resting place of President Lincoln, to whose pure character, true and noble patriotism and distinguished services for the Nation, the Nation pays deserved tribute. Our English friends were as lavish of their eulogies of the honored dead as Americans could be.

A ride of seventy miles brought us to Peoria—a very beautiful city, situated upon the west bank of the Illinois River, at the outlet of Peoria Lake and 192 miles from the point where the Illinois pours its waters into the Mississippi. The city is built upon a plateau extending over an area of about four square miles, and is surrounded by high and picturesque bluffs, which in the near future will surely be adorned to a still greater extent than at present with elegant residences.

Standing upon the margin of the lake, a scene of grandeur and rare beauty is before us. The lakelet at our feet is unruffled and glittering where the sunbeams stealing through the trees fall upon it, while above us are precipitous and lofty bluffs crowned with verdure and shrubbery.

As early as the year 1680, the French built a fort upon the site now occupied by the city, and established a trading post, but in 1796, when this section of country came under the jurisdiction of the United States, it was only an Indian village of the Peoria tribe. In 1813, Fort Clark was built near the lake, and settlers clustered about it; as usual with the frontier settlements under the protection of our country's flag, thrift and prosperity grew from industry, frugality and good government. Peoria was the first settlement on the river, and to-day it is a lovely little city of 25,000 inhabitants.

We made a brief visit to Galena, a city in the northwestern part of the State, notable for its lead mines, and interesting to us as being the former home of President Grant. Galena is situated upon an arm of the Mississippi, known as Fevre River. The first settlement was made here in 1826. For many years mining has been the ruling industry of the place. The veins of mineral in the vicinity of Galena run east and west; the crevices which contain it are usually perpendicular, and from one foot to twenty feet in width. The masses of ore are cubes, like those formed by crystalizations, and many of them are geometrically exact in shape. The ore at first is of a dull bluish color, but being broken it glistens like silver. The miners, when "prospecting," resort to several methods to determine the right locality for commencing their labors. They take into account the linear arrangement of the trees of extraordinary size, note the depressions in the surface of the ground, and many of them have great faith in the use of the hazel wand or divining rod.

The impressions of the traveler concerning the country surrounding Galena are not very favorable. The hills are generally destitute of the luxuriant verdure with which the eye has become so familiar in traversing other portions of the State, and at the first glance one might almost fancy that he was in the midst of a settlement of Mound Builders.

From "Tuttle's Centennial Northwest" we extract the following description of the mines in this vicinity: "The yellowish mound is the waste that has to be dug out by the miners in order that he may reach the ore. There are some shafts much deeper than others; many are only forty feet, while others exceed a hundred. But there is a loop on the end of the windlass rope, and one foot is made fast; you have a tight grasp with both hands, above your head, upon the faithful support to which your life is entrusted. 'Lower away' is the word, and you are going steadily down, down into Hades itself, so dark is the road below you. 'How far is it from this place to hell,' asked a would-be facetious traveler, of the Methodist who tended the windlass. 'Let go that rope and you will be there in a minute,' was the quick, if not pleasant reply. .

"The air becomes sensibly cooler as we descend beyond the range of sunlight, and the earth seems to close in around us; then there is a warmth, not entirely for want of ventilation, but an actual contribution of heat from the central fires, or from the slowly cooling rocks which have retained a portion of the sun's ardor, if not of his radiance, during all the millions of years which have elapsed since the solar system was shaped and set in motion. We are down

now in the darkness, on solid ground once more, but it is not entirely dark.

"A man stands there before us, with a candle set in a sconce of clay upon his head-gear, and if it were not for his straight hair, his thin compressed lips, and the grey eyes which partially overhaul his observer, it would be easy to believe the miner is a 'gentleman of color.' The aspect of the workman is due to his occupation; as Shakespeare says, 'The dyer's hand is subdued to the color in which he works.'

"The mine is made up of many galleries or drifts, and away at the extremity of each, there is a man at work following his lode of metal through the earth, blasting the rock sometimes to procure it, and then removing the fragments with his pick, until he has enough debris to load a tub for the windlass man on the surface. Each drift contains its man, but men do not always find the mineral for which they are searching. Mining becomes almost as alluring a pursuit as the gaming table itself. The poor fellows sometimes follow the *ignis fatuus* luck down there out of the sunlight, month after month, without procuring lead enough to pay for sharpening the pick, and still the idea is powerful as ever that a lode will be found presently that will pay for all this labor. The miner does not call his vein a lode—his term is 'lead,' and very naturally so, because he is led by it as far as the vein traverses the rock until he reaches the confines of his claim. His drive is from four to six feet high, and from three to four feet wide, without apparently any timber supports to prevent the superincumbent earth from 'caving

in,' and burying the human mole at his work. This man has found lead long, long ago, and he allows you to see him at his work, striking, lifting, driving, forcing in every way that seems most likely to effect his purpose, to dislodge the mineral from the crevice of rock into which it is wedged and fastened as metal runs into a mould. The colors which flash from the treasure as it stands there waiting to be won are sometimes brilliant as diamonds and opals, as the candle reflects its light on a hundred glancing facets, and you wish there were some richer results than lead to reward the patient labor of these sons of toil; but when they win lead enough to keep their families in comfort, they are content.

"Gold in the earth does not always look as brilliant as the mass of lead now before us, and the returns of the gold-miner are not nearly as steady as the more moderate earnings of the lead-miner at Galena. The one mineral gives a profit to its workers and to the Nation, the other is an absolute loss to the community. Mine lead, and you will find after the wages fund of the whole enterprise and all of its expenses have been paid, there is a margin of gain to be divided among the promoters. Mine gold, and although some few will strike 'pockets' and 'jewelers' shops,' the great majority of hard-working and hard-faring men will not earn wages; nay, worse than that, they do not get, in thousands of cases, enough to pay for their stores. The gold 'finds' in California and in Australia have only sold at the best for about twenty dollars per ounce, and when the number of men working in the mines has been charged against the whole result, at wages which

would readily be earned by easier work at their several trades and callings, it is found that the cost of the precious metal which will sell at twenty dollars, is a little more than twenty-six dollars and a quarter. Perhaps when gold-mining comes to be followed out more systematically by skilled workmen, with the aid of machinery and under the supervision of able metallurgists, as is growing to be every day more and more the case in our quartz mines, there will be better results in that industry also.

“Certainly gold has been mined in the most reckless way that can be imagined, and the waste of labor and capital in the process has been no more than might be expected in any pursuit in which persons without special culture would undertake to direct ‘enterprises of great pith and moment’ in which fortunes could be expended in a year.

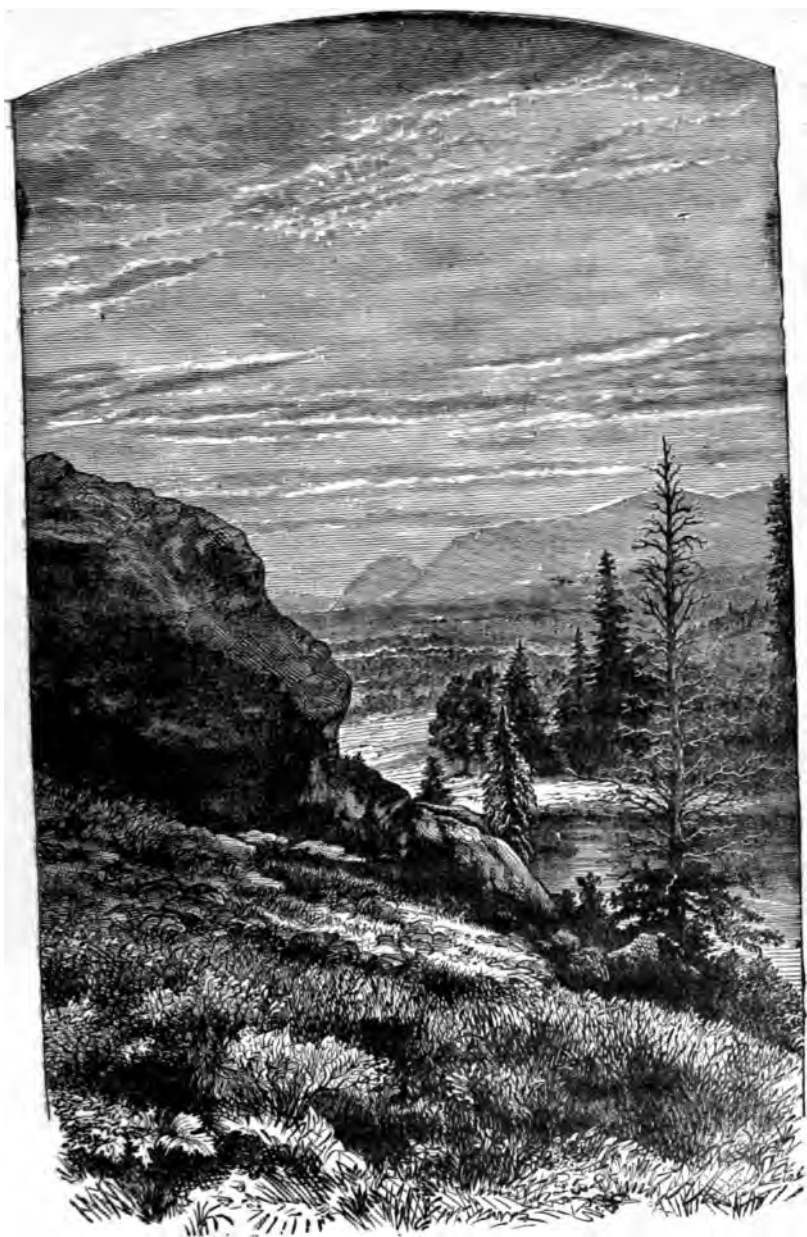
“When Galena was first made a settlement, there were no white neighbors within a journey of about 300 miles. Dubuque was mined much more extensively than any other locality in the northwest, for this mineral, and the Frenchman who gave his name to that region began his operations in the last century, when Spain still claimed sovereignty over the tract of territory under which he and his workmen pursued their toilsome avocation.”

CHAPTER VI.

Dubuque and its Surroundings—Alarm of Fire—Mike Carrigan, the Man for an Emergency—Davenport—Its Early History—Burlington—Keokuk—Quincy—Moonlight on the River—Arrival at St. Louis.

We have now arrived at the banks of the Mississippi—the “Messipi” of the Indians—whose swift-flowing waters form the eastern boundary of Iowa—which embraces an area of 55,000 square miles—the same size as Illinois. Iowa is a state of the greatest fertility, and presents a most pleasing variety of elevations and depressions, picturesque bluffs, bold cliffs, stately forests, broad prairies and beautiful rivers. The greatest elevation is in the northwestern part of the State—a portion we may see in our ascent of the Missouri, which forms its western boundary. The site now occupied by the city of Des Moines, the State Capital, was formerly the place where the Iowa tribe of Indians held their councils to consider matters of very grave importance, no doubt, such as the best way of carving human scalps and flaying white men, but they have long since passed to the “happy hunting grounds.” Their name alone remains and that will ever be perpetuated by the name of the flourishing and prosperous State.

Crossing the bridge which spans the river, connecting Iowa with Illinois—a substantial structure of stone and iron, a third of a mile in length, built



SCENE ON THE MISSISSIPPI.

in 1865, at a cost of nearly three-quarters of a million dollars—we found ourselves in the beautiful and busy city of Dubuque, claiming, and justly so I should say, a population of 40,000. No locality upon the river could present more natural advantages for a city, none could be more picturesque, interesting and grandly beautiful than that upon which the city is situated. Rising gradually from the river bank and extending back for perhaps half-a-mile, is a plateau or table land, upon which the business portion of the city stands. Upon wide and cleanly streets are imposing buildings—stores, warehouses, factories and shops of all kinds, elegant public buildings and many fine residences. A semi-circular range of bluffs rises to an altitude of nearly 250 feet above the river, the highlands being adorned with delightful residences and their ornamental surroundings.

Standing upon these bluffs, a scene strangely grand and beautiful is before you. The river, flowing majestically from its home in the hills of the north, bearing on its bosom the wealth of the country, may be seen for miles, with its arms and indentations, its promontories, and banks fringed with the foliage of grand old trees that have shaded from the sultry summer's sun and winter's storms the red men and the early voyageurs, and now standing in silent wonder for the white man's miracles of progress and masterly achievements.

This region of country is singularly picturesque and vastly interesting to the traveler, the naturalist and the antiquarian. In the immediate vicinity of the city, the country is exceedingly rough—almost

mountainous. Bold cliffs, their summits revealing solid, regular strata of rock, which may be frequently seen shooting up into towers and spires and fantastic forms, frown on every side, between which are wooded ravines, scarcely penetrable to the eye. As I have said, the city stands in a semi-circle of these stupendous bluffs fronting the river.

Dubuque has had an eventful history, for the details of which, however, we have not space. About the year 1786, Julian Dubuque, a French Canadian, first visited the country. At a council held at Prairie du Chien, in 1788, the Indians—the Sac and Fox tribes—conferred upon Dubuque—whom they called *Petite Nuit*, (Little Night)—permission to work the lead mines, and made him a grant of 140,000 acres of land. This title was confirmed by the Spanish government, and the grant was designated as “The Mines of Spain.”

A stone monument upon a high bluff, a mile or two below the city, now marks the final resting place of Julian Dubuque. The land grant was most magnanimous upon the part of the Indians; but while their hatreds are enduring, their friendships are not apt to be proof against all life's vicissitudes, and they have been known to forget their assurances of amity almost before the smoke of the calumet had vanished. After Dubuque's death, the Indians burnt his house and erased every vestige of civilized life; he had many friends, however, whose attachment was evinced by covering his tomb with sheet lead. A cedar cross still marks the place of his burial.

No permanent white settlement was begun upon the site of the present city until 1833. To that

period it was in the possession of the Indian tribes—the Sacs and Foxes, and the government of the United States would not allow them to be disturbed. In 1830, a party of lead miners who went thither in spite of the government's prohibition—and who were driven away by the United States' troops commanded by Col. Zachary Taylor—found that the Indians had abandoned the place. Tuttle, the historian, tells us in his "Centennial Northwest," that "the stalks of the last year's corn waved over the present site of Dubuque, and for miles on either side. The village of Indians which had subsisted for many years at the mouth of Catfish Creek, had been broken up for some mysterious reason, and the remains of the old wigwams alone told of the generations of red men that had come and gone. There were the wrecks of furnaces in which the feasts of the tribes had been prepared on great occasions, and in a council room which had witnessed many gatherings to discuss the relative merits of war and peace, there were rude paintings, intended to delineate and immortalize the deeds of the braves." This council house with its mementoes, which should have been preserved, was destroyed by those Huns and Vandals who early went to Dubuque, and who rendered the greatest service to the place by quitting it.

At Dubuque we took passage upon a steamer for St. Louis. The weather was delightful, and as I admired the scenery on the banks of the river, my companions busied themselves with their note books, till the occurrence of an exciting incident fraught with serious results to Mr. Barstow, our artist, for by it his sketches of localities visited, some of which

were especially fine, and destined for friends across the ocean, were utterly ruined, by the carelessness of a passenger in throwing down a lighted cigar; a paper with which it came in contact was quickly in flames. An alarm of fire was instantly, but needlessly given, for in an instant the paper was seized and thrown overboard. Although no harm whatever resulted from the flames, the greatest consternation prevailed among those who were ignorant of the facts. Mike Carrigan, an Irish servant, who accompanied the English gentlemen, rushed frantically to their state-room with the purpose of saving the baggage, and in his haste overturned a bottle of ink upon Mr. Barstow's sketches, ruining them all; but as only a part of the ink was lost, he meant to save the remaining quantity at all hazards, even if he should peril his life in the attempt. He hastily thrust the ink-bottle—neglecting to cork it—into the satchel, then cramming in the sketches, and whatever linen he could find, brushed away the gathering perspiration that was blinding him, and, satchel in hand, rushed upon deck, just in time to learn that it was a false alarm, and to turn the incident into a scene of merriment by his grotesque appearance, his face being covered with the best black ink, “warranted to grow blacker upon exposure to the light and air,” and little rivulets of ink percolating through the satchel.

“What are yees all laughing at?” asked Mike, in astonishment and indignation, his flashing eye and red and black face making his appearance still more ludicrous; and as his question was only answered by shouts of laughter, he added: “Beggory, it’s be-

cause I brought my masther's summer clothes wid me. If yees had all been burnt to death alive ye'd now be afther wishin' ye'd brought your own summer clothes," he said, with a sly wink and a nod; and with this hint of prospective purgatory he made his exit.

When within a distance of about twenty miles of Davenport, we passed the upper rapids of the Mississippi, which, at a low stage of water, seriously impede navigation. Davenport, as the reader is aware, is one of the chief cities of Iowa. It may be regarded as the principal city, in view of its importance in a commercial point of view. It is on the right bank of the river, distant 230 miles from St. Louis, in close proximity to Rock Island, Illinois, with which it is connected by a bridge.

The view of the city of Davenport, as we approached it, was strikingly beautiful. The city is built upon an inclined plain a mile or two in width, and extending from the river point back to a range of very high bluffs, the slopes of which are dotted here and there with elegant residences, while gardens, orchards, shade trees and lawns present a scene of beauty. At a little distance from the city, perhaps three or four miles, the bluffs open into Pleasant Valley, as the prairie is called, and the name is most appropriate. The diversity of the scenery and striking contrasts from the majestic elevations, to level and to rolling tracts covered with verdure, all form a picture which once witnessed will not soon fade from memory.

The gray limestone which underlies the city, crops out on the river bank, and in places there are pre-

craggy cliffs which rise to the height of thirty feet or more. In this limestone formation, have been found cornelians and agates of remarkable beauty.

The city has a population of about thirty thousand, and is notable for its extensive manufactures of various kinds, among which are superior cotton fabrics, etc. Everything in and about the city denotes thrift, prosperity and remarkable enterprise. Its history, from its incorporation in 1838, to the present time, has been most gratifying, and reflects the highest credit upon its people. The city was named in honor of Colonel Davenport, an Englishman by birth, but an officer of the American army in the war of 1812. His life was an eventful one; his noble qualities endeared him to hosts of friends, but few men of real force of character are without enemies as well as friends; Colonel Davenport, in his old age, was assassinated in his own house in Rock Island.

Some fifty miles down the river, we arrive at Burlington, a pretty and flourishing city built in a valley and upon a slope of hills, in the midst of one of the best farming regions of the State. It presents a striking appearance upon its approach, and in its topography differs from the cities higher up the river. There are, however, bluffs in the vicinity having an elevation of from one to two hundred feet. For its commercial as well as for its manufacturing interests it ranks deservedly high, and has all the elements for attaining still greater importance. It is nearly the equal of Davenport in population, but its growth is not remarkably rapid in comparison to some other of our western cities. At the

time of the organization of the state government of Iowa in 1838 it was the capital, but in 1839 the seat of government was removed to Iowa City, and later to Des Moines.

Passing Fort Madison, the county seat of Lee County, Iowa, and Nauvoo on the opposite side of the river—the latter place being notable for its Mormon associations, the killing of the notorious Joe Smith, the Mormon leader, and outrages by and upon the “Saints” prior to their exodus to the “Holy Land”—we reach the city of Keokuk—“the Gate City of Iowa,”—so called from its position, it being at the head of navigation for large vessels on the Mississippi, and two miles from the mouth of the Des Moines River, at the foot of the lower rapids of the Mississippi, which are twelve miles in extent, with a fall in that distance of about twenty-five feet, over ledges of rock. A canal would greatly conduce to the general prosperity, and will no doubt in early time be constructed. The city was first laid out in 1837, and now has a population of nearly 25,000. It is one of the most flourishing and enterprising of our western cities. Its foundries, flour-mills, and many other industries give to it deserved distinction.

The city is built at the base and upon the summit of a high bluff, and its buildings, both public and private, evince a high degree of taste and refinement of its citizens. A bridge nearly 2,300 feet in length extends from the city across the river. Keokuk takes its name from an Indian chief who, during the Black Hawk war, was a friend to the settlers. The name signifies “the watchful fox.”

Beautiful river! Lovely and picturesque scenery! What marvelous results of enterprise! These and similar expressions of surprise and delight have been uttered a hundred times and more by our passengers, as the steamer has pursued her course from our place of starting, and constantly disclosed new scenes for wonder and admiration, yet these phrases but faintly express our astonishment and pleasure as we gazed upon this delightful panorama.

Fancy peopled the banks with red men in their sylvan home, reposing in listless idleness or paddling their light canoes upon the river's bosom; the voices of their wives and little ones seemed to echo from the shady copse upon the far hillside, as in quietude and peace they chanted the legends of the brave—a people worshipping the very trees that sheltered them, their hunting-grounds that supplied their simple needs, and with a faith that puts to shame the infidelity of many Christian people, attributing all the good that came to them to the Great Spirit. They lived, they loved, they hated, they have gone. The visions of shadowy forms are but reflections of over-hanging trees that skirt the river's bank; the voices are the songs of the glad husbandman, gleaning his bountiful harvest, and the gleeful shouts of his children about the cottage door.

We are now approaching Quincy—the county seat of Adams—the county in which, as the reader will remember, are very remarkable mounds and fortifications similar to those we saw in Ohio; but we have not the time now for antiquarian researches—our business is with the living and busy present;

and animated and bustling enough is the scene now before us and before the beautiful city of Quincy, from its elevation on the grand old bluffs that rise more than a hundred feet above the majestic river, affording delightful views of the surroundings to the tourist and the forty or fifty thousand people who are proud, as who would not be to call this charming city home.

Below us, as we stand upon the summit of the bluffs, are the river landings with steamers receiving and discharging their wealth of boxes, bales, barrels, and crates of freight. Yonder is a beautiful bridge extending across the river; there the Court House, of fine architectural proportions, and very many imposing edifices for business, and scores of elegant residences; there we see incoming and outgoing railway trains on roads that radiate from the city in all directions; we count a couple-of-dozen church spires, and many school-houses, and to whatever point we turn our eyes—stretching beyond the range of sight, are grounds of great fertility with their golden plush of grain, thrifty orchards laden with ripening fruit, and gardens of rare beauty. The air is balmy and refreshing; the city surely is healthful as well as busy.

The city was named in honor of John Quincy Adams. It was first settled in 1822, at which time there were but three white men in the entire county. Even Daniel Boone, had he been one of them, would not have complained of being over-crowded by his neighbors. The grist-mill nearest the new settlement was forty miles away—rather a hard way to get a living; the settlers surely earned their daily

bread. At the close of the Black Hawk war in 1832, the settlement rapidly increased in numbers. The present of Quincy is most prosperous,—her future is full of grand possibilities and probabilities from which the enterprise of her people will develop certain realities.

We are now one hundred and sixty-four miles from St. Louis and the City of Quincy, long to be remembered, is receding from our view as the river winds its way around a promontory upon the eastern shore.

Our last view of the city was at sunset of a glorious day in mid-summer. The lingering twilight gave an inexpressible charm to the river scenery, which, however, was intensified a little later when the full moon rose above the horizon. The fleecy clouds had floated by, the soft moonlight shone in splendor, and the river glistened and sparkled like polished silver. The tall and stately trees upon the bank cast fantastic shadows upon the surface of the water, and occasionally some jutting cliff, or spur of grayish rock would loom grandly up, seeming by our swift, but gentle motion to approach, like a giant sentinel to challenge our advance. Stillness reigned, broken only by the barking of a house-dog from some lone cabin in the distance, and by the gloomy cries of night birds from some nearer thicket of tangled wild-wood. The scene was singularly beautiful and impressive.

We passed the city of Hannibal, Missouri, and several points of lesser importance, and after a passage made in unusually quick time, we arrived at St. Louis.

CHAPTER VII.

Members of the Party—Departure for the "Far West"—Scenery along the River—A Thrilling Night Adventure—A Ride for Life—Furious Men and Ferocious Beasts—Off for the Plains.



The gentlemen who had preceded us for the purpose of securing a steamer of light draught for our expedition, had been successful; they had chartered a small boat—the "Elliot"—that had been engaged in the Red River trade, but had just been withdrawn. She was as trim and staunch as any steamer of her size that ever left the port. They had also engaged the services of two hunters of great experience and other essential qualifications, among which were extraordinary physical strength, and if their declarations might be credited, a thorough knowledge of the regions we proposed to visit. They silenced

our scepticism upon this point by declaring in emphatic language, some of which is not to be found in my vocabulary, that they "knew every foot of the ground" of our route. Their names were Pettibone and Nichols. They were both a little past middle life, and for nearly twenty years had been companions in the venturesome and arduous employment of hunting and trapping, and had occasionally served as interpreters for white men in their relations with several of the western Indian tribes;—with all the good qualities and as small a number of vices as ever characterized men of their vocation. Their services proved invaluable to us throughout our journey.

Mr. Barstow had spent a year in Manitoba, and therefore knew something of the Indian character. Neither Mr. Warrington nor I had been west of the Mississippi. Mr. Merideth was a New Orleans merchant. Messrs. Trask and Hervey were both Kentuckians, both remarkably expert in the use of the rifle, and both had seen the mountains of Montana. It had been my good fortune to have long and intimately known all the gentlemen of our party, whom I now take great pleasure in introducing to the reader.

On the afternoon of August 1st we went on board the "Elliot," and were soon gliding down the river. An hour-and-a-quarter after our departure, we had reached the mouth of the Missouri—a distance of twenty miles from St. Louis—and were well satisfied with the speed of our little steamer. This point, as the reader is aware, is 1,270 miles distant from the Gulf of Mexico. The length of the Mis-

souri above its confluence with the Mississippi is 3,100 miles, and from its source to the Gulf its length is 4,350 miles—the longest river in the world. Rising in the Rocky Mountains, in the northwest part of Montana, flowing east till it reaches Dakota, passing through the middle of that Territory, forming the eastern boundary of Nebraska and a part of Kansas, the river then runs almost due east through the upper third of Missouri, till it finally reaches the Mississippi. It affords an uninterrupted line of steamboat navigation to the Great Falls, 3,000 miles from the gulf. The Missouri and its tributaries drain a greater extent of territory than any other system of rivers in the world; and in addition to this, its valley is more productive and capable of sustaining a greater population than any other region of equal area.

The Indians call the Missouri the “Big Muddy,” a very appropriate if not elegant name. At the confluence of the two grand rivers, the view is very beautiful. There are no high bluffs, but the tall sycamore, birch and cottonwood trees that overhang the banks and cast dark shadows upon the waters beneath, is a scene of beauty, and especially by moonlight. A thousand brilliant stars twinkle in the sky above, and a thousand brilliant gems are reflected in the expanse of waters beneath us. The wavelets that sparkle so brightly seem to recede, and the waters to spring from an inexhaustible fountain beneath us, flowing silently on in their missions forever.

The first point of interest on the Missouri is the city of St. Charles, one of the oldest towns west of

the Mississippi, and a place of considerable commercial importance. It is situated on elevated ground, on the north side of the river, and contains a population of about 8,000. It was settled by the French, in 1764. A substantial iron bridge here spans the river. Formerly the cars of the North Missouri Railroad, that now run over it, were transported from one side of the river to the other in boats. Many manufacturing establishments are located here, and in every respect St. Charles will favorably compare with any city of its size in the West.

Passing Hermann, the capital of Gasconade County, which is seventy miles above St. Charles, we soon reach the mouths of the Gasconade and Osage rivers, both of which flow in from the south. The latter is navigable for steamboats for more than two hundred miles. Ten miles above the mouth of the Osage is Jefferson City, the Capital of Missouri.

The city is situated on a bluff on the right bank of the river, 155 miles distant from St. Louis. The capitol, which occupies a prominent site on a high bluff near the river, is a magnificent structure, and was built at a cost of a quarter-of-a-million dollars. The city contains a population of about 5,000. Apart from being the Capital of the State, Jefferson City is of but little importance. Many of the neighboring towns surpass it in commerce and manufactures. The river here is only a quarter of a mile in width, but is very deep and rapid.

Steaming on, up the river, we are charmed by the picturesqueness and grandeur of the scenery. Rocky bluffs rise abruptly from the water's edge to the

height of a hundred and fifty feet. Clambering vines, adorned with beautiful and fragrant flowers, creep out from the crevices in the walls and cover them with delicate drapery. We pass long reaches of glittering white sand that has been washed hither by the swift current of the waters. On the low "Bottom Lands" there are immense fields of corn ripening for the harvest. Long lines of willows lave their slender branches in the flowing stream, and wherever we look, the eye is delighted with a scene of beauty.

Boonville, the county seat of Cooper County, is situated on the south side of the river. This county is one of the richest in the State for agriculture, and for its deposits of iron, coal, lead and marble. This city formerly controlled the entire trade of the Southwest. One of the battles of the late war was fought here, but such was the skill of the contending forces, that nobody was hurt.

The low bottom lands on the opposite side of the river are very liable to inundation, and during a freshet the river at this point is truly majestic. The low lands, about six miles in width, are then entirely inundated, appearing like a vast lake.

We pass on from Boonville in full view of some of the most fertile and highly cultivated land in the State. Cooper and Saline Counties on the south, and Howard County on the north of the river. Ten years ago these three counties yielded a million bushels of wheat. On the rich bottom lands the soil is twenty feet deep. The immense fields of hemp are enough to strike terror to the hearts of the boldest highwaymen.

Swinging around a large bend in the river, the beautiful little city of Glasgow, Howard County, bursts suddenly into view. It stands upon a bluff and presents a fine appearance from the river. It was here that General Green, of the Confederate army, in the fall of 1861, after displaying great skill in eluding a superior Union force, effected a crossing of the river and joined General Price in the siege of Lexington. A short distance below the city is a large and dangerous bar of quicksand, into which a man will instantly sink to his waist.

Flowing in from the north, a little beyond Glasgow is the Chariton river. The steamer made a landing at Brunswick, at some distance above, and I availed myself of the opportunity of making a hasty visit to an old classmate, who lived a few miles north of the river. The visit was an experience never to be forgotten.

The locality in which my friend was established in practice, was a little settlement two or three miles from the Chariton River, with the most unpromising outlook for future greatness. I arrived, at length, after a long and hard drive over some of the worst roads I had ever passed and which more than once caused me to regret the undertaking.

The shades of night were closing around causing the tall cottonwood trees, which were outlined against the murky sky, to resemble giant sentinels standing guard over the forest, when a horseman appeared in sight riding at full speed toward the settlement, and came dashing up to the Doctor's cabin; his appearance betrayed intense excitement, while his horse was flecked with foam, having evi-

dently made a long and rapid journey. He hurriedly informed the Doctor that there had been a fight between two of "the boys" at Post's Mills; that both had been "shot all to pieces," and the Doctor's presence was desired forthwith. This demand for the Doctor's attendance was a remarkable expression of confidence in the skill of my friend, implying very miraculous power for which I had never given him credit. It was evident that some terrible affair had indeed occurred, and considering the rash temper of many of the frequenters of the Mills, it was not at all unlikely that there had been bloody work. The Doctor had long resided in that vicinity, knew well the character of the people there, and had often been called to such scenes of strife and bloodshed.

I volunteered to accompany him, an offer he gladly accepted. We buckled on our revolvers, mounted our horses, and under the guidance of the stranger dashed off through the fast-increasing gloom.

The sun had gone down behind a heavy mass of threatening clouds, and the night was quite dark, but those accustomed to traveling by night soon gain the power to penetrate even a degree of darkness, and we urged on our horses in safety, but not without difficulty.

The locality where the affair had transpired, which created so much excitement, was on an arm of the Chariton river, on the west side—a place known as Post's Mills, eight miles, at least, beyond the river. A darker and more lonely road could not be found, even in this wild region of country—

the wildest in the State. It lay through dark and dismal woods, abounding with wild animals and often traversed by desperate men.

We pushed onward as rapidly as possible. Arriving at the river, we led our horses on board of a small flat-boat which the messenger had, with difficulty, ferried over and moored,—the old ferryman not being at his post. Using the clumsy oars with a will, we soon reached the opposite shore, then mounting our horses again, we arrived at the Mills after another hard ride. The Doctor's visit was useless, for one of the men engaged in the affray was dead, and the other was mortally wounded—the messenger's statement at the Doctor's cabin having been literally true. It required but a single glance to know that the man's moments of life were numbered. The Doctor rendered the sufferer as comfortable as possible, and in compliance with the whispered request, promised to write to the man's friends in Virginia.

Never will the scenes of that night be forgotten. In a low and comfortless room, upon a cot, lay the dying man, and there about him stood a half-dozen rough-looking men, who evidently were ever ready for strife and deadly encounters upon the slightest provocation, but now awed into silence by the presence of ghastly death. The dim light of a solitary candle, standing upon a block that served as a table, made the figures weird and terrible, while the low rumbling of distant thunder presaging a coming storm, and the vivid flashes of lightning that at times illuminated the room, rendered the scene impressive and awful. The Doctor turned away, for the man was dead.

The storm, which had been gathering for several hours, now burst in all its fury; the tall trees with their huge branches swayed and trembled in the blast, like the masts of some fragile vessel in a gale; the lightning hissed through the air, and the artillery of heaven sent forth peal after peal that made the very earth tremble.

While we waited for the storm to abate, one of the men related the circumstances attending the duel which had ended in the death of the combatants. The men were drinking whisky and playing cards, when a dispute arose between them, and a duel instantly took place, with pistols, at a distance of six paces. It was a deadly contest between two desperate men, who regarded an imputation upon their "honor" an offense which could only be expiated by resort to duelling.

By the time the man had finished his account of the horrible affair, the storm had abated sufficiently to allow us to depart. We mounted our horses and started homeward. Riding in silence, making our way along the road, which was frequently obstructed by trees that had been prostrated by the furious storm, we meditated upon the scene we had just witnessed. After a time the clouds passed away, leaving the sky clear and the moon shining upon the clearing with a light almost as bright as day. Not a word had been spoken for the first mile or two, our close attention being required to avoid accidents. Suddenly a long startling howl broke the stillness, causing us almost involuntarily to rein up our horses and to listen. Was it possible that we were pursued by bloodhounds? Before I had time

to ask the question, the Doctor exclaimed, "Heaven preserve us! The wolves are upon our track! We must ride for our lives or we cannot escape them!"

All that I had ever read or heard of such perils flashed upon my mind. We started off at break-neck speed, endeavoring to keep in the road as best we could, it being our hope to reach the Chariton before the wolves could overtake us, and then we might cross in safety. We urged our horses onward at their utmost speed—winding and twisting among the fallen trees and beneath the dripping branches that completely drenched us as we passed, and in imminent peril of having our brains dashed out in the mad flight, but even this fate was preferable to falling into the merciless jaws of our pursuers.

At frequent and lesser intervals, came those blood-chilling howls, increasing in volume as if by fresh accessions of numbers, and sounding nearer and nearer. Onward we dashed, but swift as was our flight—fortunately we were well mounted—the hungry wolves came more swiftly. Looking backward, we could dimly distinguish a dark mass of countless demons, leaping forward, and but a few hundred yards in the rear, while the short, snapping bark of the animals sounded ominously of approaching fate.

Soon on either hand, could be distinctly descried the dark, leaping forms keeping pace with the horses, their red, glaring eye-balls gleaming with fearful distinctness. We discharged our revolvers with good effect at the foremost of the pack, that were now within a few feet of us; this had the effect

of keeping the ferocious beasts from seizing upon the snorting, terrified horses, but should the noble animals stumble and fall, they would never rise again, and with so terrible a calamity, our fate would have been quickly sealed.

The speed with which we advanced soon brought us safely to the river, where we confidently hoped to escape by means of the ferry boat in which we had crossed several hours before, but a single glance at the river dispelled that hope, for the storm had swollen the waters to a flood, and in their might they had risen far above and beyond the banks and had swept the boat away. It was death to stop, and almost equally perilous to plunge into the rushing waters; even there, however, was the glimmering of hope, and not for an instant did we hesitate, but made the fearful attempt. The horses exerted their utmost strength, but their race for life had exhausted them to such a degree that they were borne rapidly down the stream. The wolves followed no further than the water's edge. Having escaped death in its most terrible form, we now struggled for our lives with the foaming, rushing waters. I was about six or eight yards in advance, my horse being the more powerful of the two. On looking back, I discovered to my horror what appeared to be a huge log coming down upon my companion, who discovered it at the same moment and struggled hard to escape it; but his efforts were in vain—the moving mass, whatever it was, struck the horse, causing the animal, and with him the rider, to sink from sight; the horse instantly disengaged itself, but my friend had been borne down

by the swift current. Holding to the horse's mane and struggling by his side, I reached the shore.

Again mounting, I rode along the river side in the hope of discovering the body of my ill-fated companion, but in vain. Cold, wet and utterly exhausted, I rode to the Doctor's cabin, on the saddest errand a friend can perform—to convey the melancholy tidings to the Doctor's family.

It was already early dawn—a night of horror had passed, and an hour after sunrise I was again on board the steamer, which now proceeded on her course.

Brunswick is near the mouth of Grand River, in Chariton County. It is one of the oldest towns in the State, and is an important point on the St. Louis & Great Northern Railway, although its population does not exceed 3,000. It formerly occupied a beautiful site on the "bottom lands," but the river has gradually encroached upon its area and crowded the town back to the bluff, which the restless current is threatening to undermine.

Still borne along, winding around magnificent bends and by frequent landings that throng with crowds of whites and blacks, we arrive at Lexington, the capital of Lafayette County. It is situated upon the south bank, on an abrupt bluff that completely hides its view from the river. Large warehouses and manufacturing establishments are located at the foot of the bluff near the steamboat landing. From the deck of the boat the entrance to an extensive coal-mine may be seen just above the landing. A good road to the town has been formed by a deep cut through the bluff. The city contains a

population of about 6,000, a dozen or more churches, a good college, and the usual county buildings. In November, 1861, a Union force, 3,000 strong, was captured here by a superior force of the enemy. Lexington is a beautiful little city, and controls the trade of a most productive territory. It is 370 miles distant from St. Louis.

The next important point on the river is Kansas City, which its citizens proudly call "the metropolis of the West." It is situated upon the right bank of the river, in Jackson County, two miles below the mouth of the Kansas River and the State line. By the river, Kansas City is 460 miles from St. Louis, but by the Missouri Pacific Railroad the distance is but 282 miles. The railroad buildings, important factories and numerous warehouses are situated at the base of the bluff upon which the city is chiefly built. The streets extend to the river through deep cuts in the bluff. The buildings in the business portion of the city are very imposing, and the streets are wide and regular, giving to the visitor a most favorable impression. The population of the city in 1860 was 4,418; in 1870 it was 32,260—an increase of 650 per cent. It is now probably 60,000. Few, if any cities in the Union, have ever equalled its ratio of increase. It is not of a mushroom growth, but possesses all the hardihood and vitality of the enduring oak. The causes that created it are still existing and will continue to increase its importance. It will doubtless in the future, as it has for the last quarter of a century, control the entire trade of the great Southwest. The many thousands who yearly seek homes on the

fertile lands of this region of the West, will pour their productions into the markets of this prosperous city. At a future day it will be a powerful rival of St. Louis.

There are chambered mounds in the eastern part of Clay County, Missouri, which form a large group on both sides of the Missouri river. The chambers are, in the three opened by Mr. Curtiss, about eight feet square, and from four-and-a-half to five feet high, each chamber having a passage way several feet in length and two in width, leading from the southern side, and opening on the edge of the mound formed by covering the chamber and passage-way with earth. The walls of the chambered passages were about two feet thick, vertical, and well made of stones, which were evenly laid without clay or mortar of any kind. The top of one of the chambers had a covering of large flat rocks, but the others seem to have been covered over with wood. The chambers were filled with clay which had been burnt, and appeared as if it had fallen from above. The inside walls of the chambers also showed signs of fire. Under the burnt clay in each chamber, were found the remains of several human skeletons, all of which had been burnt to such an extent as to leave but small fragments of the bones, which were mixed with the ashes and charcoal. Mr. Curtiss thought that in one chamber he found the remains of five skeletons, and in another thirteen. With these remains there were a few flint implements and minute fragments of earthen vessels. A large mound near the chambered ones was also opened, but no chambers were found therein; neither had the bodies been burnt.



This mound proved very rich in large flint implements, and also contained well-made pottery, and a peculiar "garget" of red stone. The connection of the people who placed the ashes of their dead in stone chambers with those who buried their dead in earth mounds is, of course, yet to be determined.

We pass the mouth of Kansas River, a long, wide but shallow stream, which is not navigable even for vessels of the lightest draught, and land at Wyandotte, Kansas, just above the mouth of the river. This is a beautiful little city, located upon a bluff from which it commands a fine view of Kansas City, —in Missouri, two miles distant. It contains about 5,000 inhabitants, but owing to the proximity of Leavenworth and Kansas City it is of but little commercial importance.

At this point our entire party left the boat, which was to proceed to Leavenworth to await our arrival, and pursued our way westward, with the purpose of first seeing the Capital, and then as it was the time the buffalo hunting season usually begins, we proposed to try our luck in the pursuit of the roaming monarchs of the plains.

CHAPTER VIII.

Beautiful Kansas—Topography of the State—Vast Prairies—Game—
The "Great American Desert"—The Lost Race of Men—Wonderful
Discoveries—Topeka—Lawrence—A Hunting Expedition—Vast
Herds of Buffaloes—Indians—Our Camp.

Within the limits of the beautiful and flourishing State of Kansas is a population not far from a million, with cities and towns that for opulence, thrift and beauty, vie with any of similar size in any part of the United States; there are farms of the greatest fertility, under the highest state of cultivation, the varied productions of which are transported by steamers and railway trains to distant markets; numberless factories and workshops of various kinds, giving employment to scores of thousands of skilled artizans; educational institutions that rank with the best in our land, choice libraries, numberless churches, and all the concomitants of the highest culture and refinement; and hither other thousands are coming every year, to share in the general thrift and prosperity which now distinguishes this fair land.

Such marvels of enterprise, such grand achievements, such glorious results as are apparent in very many localities of the State, excite wonder and admiration, and especially in view of the fact that less than twenty-five years ago the entire territory of the State was only a vast Indian reservation, upon which no white man might presume to

build a habitation or pitch his tent without permission of the lords of the soil, the Red men,—that until the year 1854, the ever-memorable date of the repeal of the Missouri Compromise—none but missionaries and a very few white traders ventured to cross the boundary which separated Savagery from Civilization. What a glorious history is that of Kansas, as brief as it is! What a glorious future will be hers!

When the portals of the State were opened by the act of the government, in rushed thousands of people from the Free States, from the Slave States, and from the Old World. Of the hardships and perils of the early settlements, we have no need to speak, the occurrences are so recent and the history so generally known to all the civilized world.

Kansas embraces an area of 80,000 square miles, being about 400 miles in extent from east to west, and 200 from north to south. Even with the figures before us, it is not easy to conceive of the vast magnitude of this and others of our Western States. Kansas is far larger than the whole of New England whose sons and daughters in great numbers have here made their homes, and by their enterprise contributed largely to the prosperity of the State of their adoption. It is a vast undulating prairie—a magnificent savanna of remarkable fertility, where Nature rewards enterprise and industry with a lavish hand. Many thousands of acres have been taken by actual settlers, and other millions of acres are waiting for other settlers yet to come. Underlying portions of the State are various minerals of great value.

In regions where man has made his home, the mesquit and buffalo grasses are giving way to the blue grass, timothy and clover; the buffalo wallows are being broken up by the plough, trees are springing up in regions that formerly were treeless, creeks that were almost dry, now flow in abundance.

In Eastern Kansas, there is a sufficiency of timber to meet present requirements, and a new growth will maintain an adequate supply for future time. Here we find five varieties of oak—the red, white, black, burr and water; then there is the elm, black and white walnut, butternut, cottonwood, box-elder, hackberry, honey locust, willow, hickory, sycamore, white ash, sugar maple, mulberry, linden or basswood, crab-apple, wild-cherry and coffee-tree. Of shrubs and vines there are the elder, sumac, green-brier, gooseberry, hazel, paw-waw, prickly ash, raspberry, blackberry, prairie rose and grapes in great variety. Kansas, therefore, is not a "treeless waste," as some may have supposed, nor is it often subject to drought and the incursion of grasshoppers. The almost annual occurrence of prairie fires has to a considerable extent prevented the growth of forests, but where trees in great numbers have grown, the soil is less dry and the regions less liable to furious storms.

In the western part of the State, there are vast tracts of prairie land extending over hundreds of miles, covered with buffalo grass; and over these plains, immense herds of buffaloes, antelopes and wild horses roam, seemingly undisturbed by the huntsman's rifle or the shrieking of the steam engine. These vast savannas are watered by streams

varying in size from running brooks to great rivers and their branches—the Arkansas, Smoky Hill, Neosho and Kansas—all of which are skirted with timber. The western part of the State is from 2,000 to 3,500 feet above the level of the sea, and the climate is remarkably healthful.

As we glance at our school maps over which in boyhood's days we used to puzzle, wondering if there were camels and occasional oases in the "Great American Desert"—printed in large letters just below—"Unexplored Territory"—where thirsty, scorched and weary men and beasts might find shelter and a cooling draught, we find that here is the locality thereon described, but the oasis is everywhere—the desert nowhere—but rather Nature's great flower garden where Eden might have been, and far more pleasant than the land of the Euphrates in our day. Wherever antelopes and deer and buffaloes in countless herds find pasturage, and where from time immemorial they have ranged, there cannot be a desert. We must say to the venerable map-maker that he was a "blind leader of the blind," and unfitted to teach "the young idea how to shoot"—that there is no portion of the territory of the United States east of the Rocky Mountains that can with any degree of truth be called a desert; and it is reasonable to infer that wherever buffaloes and antelopes and deer and wild-horses will thrive and fatten, domestic cattle will not greatly suffer for lack of sustenance. In Western Kansas, cattle of the plains are as fat as those that are stall-fed in the East.

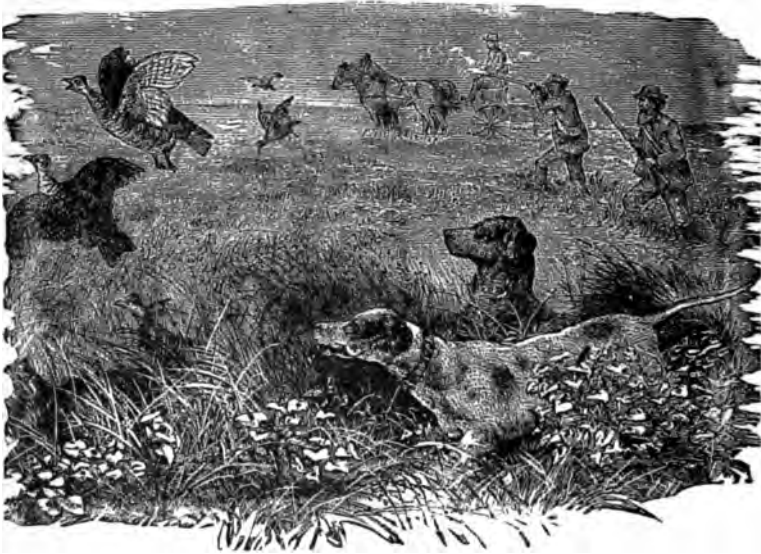
In this State, the trade in Texas cattle is very

large. They are annually brought in vast herds by Texan drovers to points along the Pacific Railroad.

To the historian, the naturalist, scientist and archæologist, as to the tourist, Kansas is a territory of great and special interest. We have spoken of the works of the Mound Builders. Recent discoveries in this State afford still further traces of this mysterious race, or of those who may have been their enemies, or possibly of a race who lived and passed away even before the existence of the Mound Builders. The wrought stone implements found in the ancient river gravels of California evidence that during or prior to the glacial period, the Pacific coast was inhabited by man. Recent archæological explorations in Kansas show that at a period equally remote, this region was also inhabited by the human race. The geology of the region is simple. Prior to the drift epoch, the river channels were deeper than now, and the river valleys were lower. Subsequently the valleys were filled by a lacustrine deposit of considerable depth. In or beneath this last deposit, the remains of an extinct race appear.

Such remains have been found at various depths in seven different counties along or near the Kansas Pacific Railroad, viz: Douglass, Pottawatomie, Riley, Dickinson, Marion, Ellsworth and Lincoln Counties. With one exception, the remains have all been found on the second bottom or terrace of streams, and consist of stone implements, pottery, human bones and bone implements. In most cases they were struck in digging wells at a depth of from twenty to thirty feet below the surface. In view of the fact that there is not more than one well to the

square mile, in the counties named, and the area of a well forms but a very small fraction of a square mile, the evidence is deemed sufficient not only to prove the former existence of the buried race, but that they were very numerous. We can hardly assume that chance has directed the digging of wells only where human remains are buried. Whether the race existed before the glacial period or immediately after, is a matter of speculation. "Here," says West, "We have a buried race en-



wrapped in a profound and startling mystery—a race whose appearance and exit in the world's drama precede stupendous geological changes marking our continent and which, perhaps, required hundreds of thousands of years in their accomplishment.

By the middle of September at latest, we must return to the steamer, and as we have a project in view for visiting many distant, interesting localities before that time, we now proceed by rail to the State Capital.

Topeka occupies a lovely and elevated site on the south bank of the Kansas River, sixty-seven miles westward from Wyandotte. It is a beautiful, busy and eminently prosperous city. Its imposing and elegant buildings, located upon wide streets that are well shaded with trees, its general appearance of activity and thrift speak volumes for the enterprise and industry of the citizens. Here are flour mills, foundries, machine shops and manufactories, warehouses and first-class mercantile establishments, all telling of the great extent of inland trade which conduces to the general prosperity. The elegant State-house and many other magnificent structures claimed our attention. The principal railroads that center here are the Kansas Pacific and the Atchison, Topeka & Santa Fe. The commercial relations of the city with Santa Fe, greatly add to its prosperity.

In 1860 the city contained less than 1,000 inhabitants, but now its population is at least 25,000.

At a distance of thirty miles eastward from Topeka and thirty-eight miles from Leavenworth, on the Kansas River, is the city of Lawrence, quite as flourishing and prosperous as either, and containing a population of about 20,000. It is surrounded by a most fertile farming country, which is generally highly improved. The city is built on a rising ground, and possesses many attractions. In addition to its

railroad depots, factories, machine shops, mercantile establishments and other industries, its educational facilities are excellent. It is the seat of the State University, so well and favorably known throughout the West. The struggles and trials of the early settlers of Lawrence are well known to the general public. In 1856 a pro-slavery mob destroyed a vast amount of public and private property, but the greatest affliction the city sustained was in 1863, when the guerilla Quantrel and his band of murderers fell upon it and massacred 150 of the unarmed citizens, burned a great number of dwellings and committed other gross outrages. The act was universally condemned by the people of the North and of the South, and everywhere the name of the monster whom it were base flattery to call man was execrated. So far from being warrantable by the circumstances of war, it was the deed of the midnight assassin, the enormity, diabolism and cowardice which language is powerless to express.

Having been fortunate enough in Topeka to obtain some fine and well-trained horses, and such supplies as we required—the latter not being a heavy purchase, as we had made ample provision of fire-arms, ammunition and other essential equipments in St. Louis, which articles were now brought forward by our hunters who had enjoyed a long holiday at Leavenworth—we started on an expedition to the prairies of the Southwest. Leaving Topeka by the Santa Fe Railway train, we were early on the *qui vive* to see the buffaloes of the plains, having hitherto seen only those of zoological gardens in the East. For a long time we watched in vain. Ante-

lopes occasionally favored us and prairie dogs innumerable, perched upon their mud houses, could be seen, and only these. At last, in the dim distance, a solitary buffalo—perhaps on picket duty—gladdened our eyes, but for miles we saw no more.

At length we entered upon the range, and there we descried with delight vast herds of buffaloes, apparently extending for miles in all directions, huddled in distant masses like islands of the sea; at other times these unwieldy animals were so persistent in their course that it became necessary to stop the train and wait till they had crossed the track—an occurrence which is here not so very uncommon. In the present instance it was explained by the appearance of a party of Indians, well mounted on agile horses, who followed in quick pursuit.

It was an exciting chase, and greatly did we regret our inability to participate in it. Swift as the wind, pursuers and pursued dashed away, till the distance and clouds of dust concealed them from sight. Pettibone and Nichols, who observed our eager anxiety to join in the chase, assured us that our aid or our presence would be anything but welcome to the natives, and if we wished to avoid “unpleasantness” we would strictly mind our own business. This course, so generally commendable in the affairs of life, we were constrained to follow, as we were dashing onward at thirty miles an hour, and were a hundred miles distant from the station for which we had taken tickets. We consoled ourselves with the confident hope of similar sport to our heart’s content a little later on.

In Kansas there are about 10,000 Indians, nearly

two-thirds of the number living upon reservations, the others pursuing a nomadic life and subsisting by hunting. During the season when the buffaloes return to the north, they eat the grass of the whole country over which they range, so closely that it seems barren of vegetation.

The day was far advanced when we halted at the little rude but brave station which was to be our point of landing. With little difficulty we were soon mounted and ready for departure. Our course was toward the south. We had passed the Arkansas River, and now pushed onward as rapidly as possible, hoping to reach an arm of the river, which would afford a suitable locality for an encampment for the night.

We were now upon the boundless prairie, which presented a scene of surpassing grandeur and beauty indescribable. Our wish was at last accomplished—the wish we had often expressed, of reaching the prairie country during the summer, before its beauties should be withered by the chilly winds of autumn. Of these vast plains of luxuriant verdure and beauteous flowers, much has been written but the half has not been told.

With the first month of Spring, Nature dons her holiday dress. Beautiful flowers in endless variety and rank profusion cover the plain. Summer adds new beauties to the exquisite loveliness of the scene. From March till September there is presented to the eye a fascinating panorama of floral beauty of every tint and hue.

“These are the gardens of the desert, these
The unshorn fields, boundless and beautiful,
For which the speech of England has no name.

The Prairies! I behold them for the first,
And my heart swells, while the dilated sight
Takes in the encircling vastness. Lo, they stretch
In airy undulations, far away,
As if the Ocean in his gentlest swell,
Stood still, with all his rounded billows fixed
And motionless forever."

Far away extends the limitless scene, bounded by the horizon on every side, its green carpet richly variegated with countless thousands of wild flowers, while here and there at distant intervals, the surface is adorned with little groves of oak like low islands risen from the sea. The general evenness of the ground is sometimes broken by mounds where may sleep the unknown dead. Millions of human beings may have passed over the broad expanse in the ages that have gone, as we are passing now. In the years that are to come, great cities will rise upon this ground and the sons of toil will convert these vast savannas into wheat fields, whose abundance may supply less favored regions of the globe.

The scene is now transcendently beautiful. Upon this limitless plain, the tall grass waves gently in the breeze, bending, rising, rolling to and fro like the waves of the ocean; and indeed the traveler feels that he is at sea beyond the sight of land, and he looks in vain to catch a glimpse of one single fading outline of the far-off shore; the creaking of masts and cordage and the ocean's roar only are wanting to render the illusion complete, as the traveler wanders entranced in the midst of an illimitable flower garden.

During the autumnal months of dry weather, the vegetation is converted into combustible materials

that burns with terrible fury, consuming everything when perchance a flame has once been lighted. The burning prairie presents a scene, especially in the night, transcendently grand and sublime. No spectacle can be more awful than such a night scene—a river of flame of miles in breadth, rushing with fury over these plains, leaving behind it a dense black cloud, all devouring as it goes, casting before it a vivid glare which illumines the whole landscape with the brilliancy of noon-day, and pictures pandemonium on the sky. A roaring, crackling sound is heard like the rushing of a hurricane or the thundering of Niagara's mighty waters. The lurid flame rising high into the air in a sheet of blinding brightness, now low sinking to the earth, its fury seemingly passed, but quickly darting upward like millions of fiery serpents or like the spray of dashing waves upon a rock-bound shore; anon it is a boiling, seething sea of dazzling brilliancy—a scene of sublimity that defies description. Travelers not unfrequently have found escape impossible and perished in the raging element.

As we rode onward Nichols recounted several instances within his knowledge where emigrant parties had thus fallen victims to this horrid fate. I was especially deeply touched by one, where a whole family consisting of seven so perished.

They had been many long and weary weeks upon the journey, and were within a few days' travel of their place of destination, full of life and hope, rejoicing that their trials were well-nigh ended, and building air-castles as they discoursed of their future home. At the close of a balmy and beautiful

day in Autumn, the father and eldest daughter went in advance of the emigrant wagons to a little grove not far away, where the party proposed to encamp for the night. They kindled a fire beneath a covert of large trees and were preparing the evening repast, when by some means the dry grass caught fire. The wind was blowing directly toward the advancing party, and in a few moments the prairie was on fire—the little flickering blaze had become a sea of flame. The dry grass caught like tinder, and sent up broad sheets of fire that every instant widened. The horror, the unspeakable agony of the loving and loved ones can only be imagined, for when the morning dawned, the Indians, who passed over the desolate and blackened plain, discovered the charred bodies of the ill-fated emigrants. The details of the horror can never be known, but this is certain, that father and daughter gave up their lives in the vain attempt to rescue the others, for had they remained in the grove they would have been safe. Their heroic efforts had involved them in the common fate of the other members of the family.

To fully describe the Western prairies is impossible. To be known in all their grandeur they must be seen. The people of the East are accustomed to a great variety of natural scenery—often of beauty and sublimity,—dense unbroken forests covered with foliage, mountains and vales, beautiful rivers and bays studded with islands, but in the great West only can be seen the magnificence of the boundless prairie.

We had traversed many miles without the slightest incident of interest to the general reader. The

exciting spectacle we had witnessed from the railway train had vanished, and neither buffalo nor Indian had since been seen. Both Barstow and Warrington had busied themselves collecting floral specimens, while Pettibone and the two Kentuckians had disappeared together, in quest of game. It was late in the afternoon when they intercepted us upon the route, bringing with them a couple of birds and a deer as their trophies. The sun was far down the sky, giving rare tints of beauty to the fleecy clouds, when the hunters announced that we were not far distant from a large water-course and a belt of timber, but from what indications they formed this opinion we knew not, for to us the scene was changeless; but soon the prediction was verified; to the southwest, perhaps a league distant, we descried the outline of a forest, and quickening our speed, we soon reached the timber—a tall growth of cottonwood.

In such lovely localities, as this we now entered, have sprung up thriving towns and hamlets all over the eastern section of the State. As this site of beauty appeared to us, so have other similar sites appeared to the hardy pioneers who have gone forth from the bounds of civilization to plant in Western wilds the villages and cities from which other pioneers will journey forth upon a similar mission. So came the men and the women to the fertile lands of Kansas, before the railroads, that now are highways of travel throughout the State, had been dreamed of by even the most visionary speculator, certainly had not been constructed, and the Indians and the traders had it all their own way, and sent up shouts

and shrieks that made the forest ring, and startled the wild deer of the plain—perhaps as loud and shrill as any that now come from the brazen throat of the locomotive, that wondrous mechanism that drives all before it, and bears in its fiery train the wealth of remote cities, as it comes dashing and thundering along its course. The wild beasts fled before it, the Indians followed them, and the pioneer followed both, with axe and torch; the monarchs of the forest, from whose wide extending arms hung heavy festoons of moss of varying hue, and whose huge trunks were ivy-twined, fell with echoing crash; fires consumed the underbrush, and only occasional charred stumps and scathed trees remained; even these vestiges soon gave way to the village church, whose slender spire rose heavenward, and to the little red school-house; then came corner lots, with fortunes in them, then pretentious cities rose, and rural simplicity gave way to opulence and splendor. So have risen all over the West the great cities of which all Americans are justly proud.

Here, then, we were at last, in a beautiful grove upon the banks of an arm of the Arkansas, with its gigantic trees, and its tender saplings peering upward so proudly, and yet not half as high as the vines that coil about large trunks and far-reaching branches, ambitious to clamber above the waving tree-tops, and bask in the glorious sunshine that here and there steals down between the heavy foliage to see how the little woodland flowers and dainty shrubs and pretty mosses are prospering; here the wild birds pursue their peaceful flight, and squirrels skip from bough to bough, always in a hurry, as if

to make the most of their existence; the large streams abound with fish; here are prostrate trees, uprooted by the storms, these scathed and cleft trunks that have been blasted by the lightning's stroke, but here is nothing to denote the havoc or the presence of man.

All is silent as the tomb, except the shrill notes of birds, the cries of wild animals far away, the sougling of the wind sweeping through the tree-tops, and the rush of waters of a beautiful little cascade that helps to swell the distant river. A lovely and suitable sight was this for our encampment.

A fire was soon kindled, and the deer and birds so opportunely taken, afforded a delicious repast. Our horses were coraled, our tents pitched, our beds made—as well as could be done by piling up the boughs of trees and covering them with blankets—and so we began “house-keeping.”

The sun had long since sunk upon the bosom of the setting cloud, tinting the fleecy west with his gorgeous pencilings. Night came on but the moon, high in the heavens, silvered each shrub and leaf and flower with mellow light, intensifying the beauty of the scene, while the voices of Nature impressed the mind with a feeling of utter loneliness, but not of sadness. There upon the margin of the prairie at that hour was the place for silent thought. What the origin of these expansive tracts? Have they been reft of timber and gradually widened by the fires that annually sweep over them, or did the Almighty smooth these verdant lawns and leave them ever treeless? The settler, observing the

groves springing up as by magic wherever the fires have been prevented for a few years, believes they have been formed by the ravages of fires.

And what of the various tribes with which the country has been successively peopled? In remote ages, while Greece was in her infancy, perhaps before the construction of the Pyramids of Egypt, here lived a race of men who knew something of the arts of civilized life. Here they plied their avocations—lived, labored, loved, hated, perished. In the West are their temples, their fortresses and their tombs. Will the research and the ingenuity of man yet tell us more of them, or will oblivion and profound mystery ever veil their history? Are there no hieroglyphics yet to be deciphered that will acquaint us with the knowledge of their fate—by what great catastrophe they were swept away? They were, and are not—all else is conjecture. Then came the red men, but yearly decreasing in numbers, their history will soon close—the race be extinguished. Barbarianism recedes before the advance of civilization—heathenism before Christianity. As with individuals, so with tribes, so with nations, vice and immorality always presage decay.

As we were assembled about the camp fire, the hunters entertained us with some of their adventures, and Mr. Barstow related a thrilling incident in his own experience with the Sioux Indians, which may interest the reader as it interested us.

CHAPTER IX.

Tales About the Camp Fire—The Sioux Indians—A Scrap of History—
A Thrilling Adventure.

There are many pleasanter things in life than a night visit from black wolves or even prowling and cowardly coyotes, panthers, or even unfriendly Indians, and hence the necessity of our establishing a night watch, and keeping a blazing fire during the night. These prudential measures settled and our duties understood, Mr. Barstow began his story, which was the more interesting for being true:

“On the 20th of November, 1863, a party of twelve Sioux Indians with their families arrived in the colony of Red River. They expressed their surprise that a large body of their people who had preceded them had not arrived. Their statement, of course, produced some uneasiness in the colony, which was not tranquilized by the appearance, on the 11th of December, of their friends, numbering sixty lodges, containing nearly 500 Sioux, who were in a state of absolute starvation.

“These Indians, in nearly every instance, had been deeply implicated in the border massacres of Minnesota and Dakota, and as ill-disposed savages at war with the Americans, and likely to prove the occasion of bloodshed with the Salteaux of the neighborhood, they were in every respect unwelcome. In their first interviews with the authorities they frankly stated they had come to live and die in



AROUND THE CAMP FIRE.

the Red River settlement, where it was better for them to attempt to gain a livelihood from the charity of the whites, than to return across the line, to be shot by United States troops, or perish in the snow-drifts of the prairies.

It had happened that the harvest of that year, in the colony, had been a failure. To add to the burdens of the settlers the fall buffalo hunt also had been a partial failure. These considerations caused the project to be openly discussed of driving away the Sioux by force. This was undoubtedly practicable. The blood-stained tribe had no guns, ammunition or means of defense, save their manifest helplessness, which would expose the settlers to the alternative of murdering them in cold blood, or allowing them to freeze in the wretched lodges they had constructed to shelter them from immediate contact with the winter blasts.

The spot they selected as the site of their camp, was Sturgeon Creek, about six miles west from Fort Garry. The people living near the place may be said to have dwelt in a state of siege during the whole period of their residence. Windows and doors were kept perpetually closed, under fear of being entered by some watchful savage, ever ready to take advantage of any such opening which might present itself. The amount of assistance bestowed by the people on the spot was considerable, and highly creditable to the donors, who knew that everything given as a present to the Sioux was grudgingly and enviously remarked by the Salteaux, regular occupants of the settlement, who jealously regarded all such gifts as their own particular perquisites.

The Sioux camp had gradually increased in numbers towards the close of the year, to about six hundred, through the continued arrivals of small parties. Words can scarcely convey to those who have themselves seen nothing of the kind, any adequate idea of the extremity of the destitution to which these people were reduced. It was seen in the gaunt, skeleton look of the men, who came with hoarse voices, to implore aid at Fort Garry, and in the hopeless, wolfish glance of their eyes. It was with difficulty that they could be prevented from laying violent hands on anything eatable, and helping themselves. Most of them were, indeed, almost naked.

The project of driving them away by force was not for a day entertained by the men in office. The act would have been tantamount to murder. They were without clothing, and the thermometer was ranging between twenty and forty degrees below zero. They had not even the necessary wire to snare a rabbit. Usually as much adverse to part with their children, to be educated by the whites, as the latter would be to abandon their offspring to them, they then sold their children gladly to any who would give them food in exchange. Three young white children whose parents has been massacred, were taken from them and cared for by private settlers. The Grey Nuns of the little Convent of St. Francois Xavoir took advantage of the presence of a party near their residence to purchase a boy and three girls from them, for an equivalent of 120 pounds of dried meat, and would have bought a greater number had they possessed the means to buy and care for them.

"After being assured of a large supply of provisions, the Sioux promised the executive officer of the Hudson's Bay Company, Governor Dallas, to leave the settlement, and actually quitted their camp on the 25th of December. They did not, however, proceed farther than the out-post of White Horse Plain, twenty-five miles from Fort Garry. There they halted and demanded ammunition, which was peremptorily refused, though not without strong misgiving that they would help themselves. This they did not attempt, and some more provisions were distributed among them through the agency of private parties so employed that the Indians might not know they were indebted to the government, which had they known, might have encouraged them to increase their demands.

"To the great dissatisfaction of the Salteaux, they then spread themselves in bands over the country. A large number of them went to Lake Manitoba, and were extremely successful in catching jack fish under the ice. The provisions supplied them on the public account were estimated at a total value of about £400.

"Early in January, 1864, an event occurred which gave a decided impetus to their withdrawal from the colony. Some officers attached to Major Hatch's battalion, then stationed at Pembina, on the boundary line between the British possessions and the United States, visited the settlement and gained some of its residents over to their interests, to such an extent that they cordially entered into a scheme for kidnapping some of the principal chiefs. "Little Six," a half-brother of "Little Crow," and one of his

followers named "Medicine Bottle," were selected as the men to be caught. These Indians had been particularly conspicuous in the Minnesota massacre, the former having on one occasion surrounded a school-house filled with little children, locked the door and fired the building. They were at that time connected with the main band located near Lake Manitoba. At an appointed date, a half-breed was engaged to visit the Sioux camp, and with an appearance of urgency and haste, to induce the two chiefs to accompany him back to Fort Garry to meet in council with Governor Dallas. The Indians were suspicious, but were at last prevailed upon to go, and the driver timed his gait so as to reach the town shortly after dark.

"There they were landed at the store of a Scotch free-trader, shown into a back room, and told to make themselves comfortable until the arrival of the Governor. Meanwhile they were engaged in conversation through interpreters, and freely plied with liquor. As the drinking continued, the glasses given to the unsuspecting chiefs were filled with laudanum, only slightly flavored with spirits. As a result, in a short time they were insensible. Dog-sledges were in readiness, and on these the Indians were laid prostrate and bound down securely with ropes. Two half-breed drivers made the journey to Pembina in one night—about seventy-five miles—the Indians not awaking until, to their surprise and consternation, they found themselves securely bound and surrounded by a group of soldiers, under the command of Major Hatch. From thence they were forwarded to Fort Snelling, where, after due trial, they were condemned and executed.

"In May, of the same year, another event occurred to hasten their departure from the colony. Early in that month, the party which had gone to pass the winter in fishing under the ice in Lake Manitoba, were awakened one night by the discharge of firearms. They found themselves surrounded by a party of Red Lake Chippeways, who continued firing into the lodges until break of day, killing six of the Sioux outright, and so seriously wounding a number of others that fourteen subsequently died. The Sioux being unable to retaliate effectually, only one of the attacking party fell a victim to a stray shot, and at sunrise the rest departed.

"The lesson was not lost upon the Sioux, and those who were hovering in small bands up and down the colony, realized that they were in an enemy's country, and the majority of those who had wintered in the settlement finally made a peaceful exit along with the Summer Plain hunters. Those who were most notorious in acts of barbarity in the border massacre, however, remained behind, fearful of that recognition in the United States which must come sooner or later. They numbered nearly 200 souls, including, of course, their families. During the summer they moved beyond the outskirts of the settlement, and in the fall of that year took up a permanent abode in the Riding Mountains, west of Lake Manitoba, where they still remain.

"I have been thus minute in recording the movements of this band of Sioux, both as a matter of history, and to account for their presence in the Territory where the events which I am about to relate transpired.

"I had spent the greater part of the early spring months of the year 1868 in shooting water-fowl among the islets and estuaries of Lake Manitoba. I established my headquarters at a Company's post, over whose affairs an intimate friend presided, and from thence made prolonged forays on the feathered tribes. As the season advanced, however, my taste for that sport waned, and I sought other modes of chase and fresh fields for excitement and adventure. In the month of June, I fell in with one Pierre Lavie, a French and Cree half-breed of life-long experience in the wilds of the Northwest."

"Bless me!" exclaimed Pettibone. "I know Lavie as well as I do any of the boys."

"Then Lavie might safely boast of your acquaintance. But as I was saying, at the recommendation of my Hudson's Bay friend, I joined myself to him as the most suitable person under whose guidance to acquire the experience I sought; and I was assured if I followed him, I would not lack for adventure. Lavie had been formerly in the employ of the Company as a trader among the Indians, and had thus acquired an intimate acquaintance with the habits and traits of all the tribes from the Missouri to the Saskatchewan, and from Lake Superior to the Rocky Mountains. He was a linguist, and spoke with fluency seven Indian dialects. He was about forty-seven years of age; had been thirteen years in the Company's service, and had followed trapping, plain hunting and trading for a considerable longer period. The physical build of the man was perfect—tall, powerful and athletic; in color nearly resembling an Indian, but in all else

white, when among whites. He spoke English in a tolerable fashion, and unlike most half-breeds, was willing to speak it when he experienced my lame French.

"Lavie proposed spending the summer in trading among the bands of Indians scattered over the Territory embraced in the triangle of which Lake Manitoba, Swan River and Fort Ellice would form the angles. I arranged to accompany him partly as an assistant and partly as a passenger, if I may use the word, whom he was to teach the mysteries of plain and woodcraft, to protect and care for, in consideration of a certain sum of Her Majesty's coin in hand paid.

"It was the 12th of June, if I remember aright, when we left Oak Point, on Lake Manitoba. Our outfit consisted of three of the wooden carts of the country, drawn by as many ponies, and an extra saddle-horse, in case of need. I had proposed riding a horse of my own, but in consideration of the fact that we would not enter a buffalo country, and the trouble his care would cause me, I relinquished the project; all the more easily because I knew the extra pony was at my service when desired.

"The carts were loaded with our personal effects—scant enough—a skin tent, and the outfit of goods for the Indian trade. In this outfit I had, at the invitation of Lavie, and by the advice of my friend, invested a small capital. The half-breed was doubtless influenced in his invitation by the idea that my being pecuniarily interested in the outfit would have the effect of rendering me careless in the pursuit of the chase, and more attentive to the object of his

labors—a profitable trade; while my friend, by his advice, simply felt assured that I could pay the expenses of my trip in that way. Lavie proposed taking into our company an adopted boy named ‘Johnny,’ a young half-breed, about fourteen years of age.

“As I said before, on the 12th of June we started across the base of our triangle, following the well-beaten Saskatchewan road for Fort Ellice, at the confluence of Beaver Creek and the Assiniboine. Our immediate object in pursuing this route was to intercept the late plain hunters and Indians on their way to the settlement to dispose of their winter’s catch of furs, and if possible barter our outfit. Nothing occurred on the journey save the ordinary routine of plain life. On reaching the vicinity of the fort, we were agreeably surprised to find a large number of Indians and hunters encamped, and succeeded so well in trade, that in a comparatively short time our entire supply of goods was converted into robes and fine furs.

“Pleased with our success, it was determined to send Johnny back to Oak Point with the furs and two of the carts, where he was to store his load, and obtain a new supply of goods from my friend; returning to meet us at a point on Pine Creek, between Fort Ellice and the Riding Mountains, where we would await his arrival. His absence need not exceed three weeks. Johnny, starting back in company with some half-breed traders, Lavie and myself with the remaining cart and spare horse, directed our steps toward the head waters of Pine Creek.

“The country in the region of Pine, Shell and Oak

Creeks, dignified on the maps by the name of rivers, partakes entirely of the character of the prairie. Over the level expanse are scattered bluffs of cottonwood trees, whose blackened stems betray the ravages of the annual prairie fires sweeping through them."

"What do you mean by bluffs of trees?" asked Warrington, who was a great stickler for the King's English.

"The term bluff is used to designate a small grove, clump of trees, or a copse. The prairies of British America abound with them. Though the term may not be strictly correct, yet it is the one invariably used in the North, and so I adopt it.

"The streams are worn into the loose soil, far beneath the surface, and are bounded by precipitous banks. The prairies abound in numerous varieties of small game, varied, however, with a bear, occasionally, and herds of cabre deer; while the waters yield a plentiful supply of water-fowl and fish. Over this Arcadian territory, Lavie and I wandered restlessly, hunting and fishing, for two weeks, meeting with but an occasional savage, and disturbed by none. The Salteaux and the Crees, however, range over this portion of country, and are peaceably disposed.

"Surfeited at last with the, to him, monotonous life, Lavie suggested, one evening as we sat by the camp fire, that in the week intervening before the return of Johnny, we pay a visit to the Sioux camp, in the Riding Mountains. The object to be attained by the visit was to ascertain the amount of peltries they had for barter, and to open negotiations for

trade on the arrival of our goods. The project impressed me favorably. The idea of any personal danger being involved in the visit never occurred to me, as I supposed the Sioux would take me for an Englishman or a Canadian—I never dreamed of being taken for an American, though of all nationalities next to my own I would prefer being counted as one of you."

"Aye, aye," approvingly exclaimed Warrington, whose rubicund face, broad shoulders, capacious chest and obesity, will never lead to a mistake in his nationality. Barstow continued:

"On the following morning we started, and reached the mountains toward their northern extremity, and following an easterly direction, arrived at the Sioux camp on the morning of the third day. It was situated in a dense grove of cottonwood on the banks of a small stream, to which ours bears a resemblance. The number of lodges forming the little village was twenty-seven. The chief in command was named "The Leaf," and had borne a conspicuous part in the Minnesota massacre.

"It was about seven o'clock in the morning when we arrived, having started at day-break and made a stage before breakfast, and we found the majority of the male portion of the village in camp. We rode boldly up, loosed our horses and turned them out to graze, Lavie all the while carrying on an animated conversation with the Sioux, by whom we were at once surrounded. He was a perfect master of the dialect, while I understood not a word. Our labor completed, we entered the village, and partook of some meat, which was set before us. After this, we sat

and smoked, while Lavie sounded the Indians on the prospective trade. We had both retained our guns, and my own, a repeating rifle of the Henry pattern, lay across my knees, as I sat cross-legged on the ground.

"A number of savages had approached closely to where I sat, and looked curiously at the gun, but had not touched it. As they had done so, I noticed that Lavie regarded them earnestly. At length one fellow, bolder than the rest, came in front of me, and looking me squarely in the eyes, took the rifle from my knees and proceeded to examine it. At a loss how to act, I looked to Lavie for a sign, but he was apparently engrossed in conversation and indifferent to what was going on.

"The gun was however returned by the Indian, after a short examination, but had scarcely touched my knees when it was taken up by another. This time it was not returned, but was passed from hand to hand for an examination. I began to grow alarmed, and again looked toward Lavie, but he was still talking and apparently indifferent. My tranquility was not augmented by the approach of an old Indian, who, after casting a searching glance in my face, sat down close beside me and touching me with his elbow, said—'Yangee, Yangee.'

"My alarm and excitement at this, and the spiriting away of my rifle, grew intense, and I cast an appealing glance at Lavie. He was just rising from the ground and apparently addressing his parting words to the 'Leaf.' In the calmest and most indifferent tones he told me to get my gun—then in the hands of an Indian on the outskirts of the

crowd—and follow him. As I knew that Lavie's intention had been to pass the day and night at the village, my suspicions of danger were more thoroughly than ever aroused. However, assuming as careless a manner as my excitement would permit, I approached the Indian, took the gun from his hands and joined Lavie, who was harnessing the horse to the cart and still talking to the 'Leaf.' As I passed him, I hurriedly asked what was the matter, but a low 'keep still' was the only reply. Suddenly thinking of the probability of some of the Sioux speaking English, I kept still. When the horses were ready, Lavie motioned me into the cart, while he, with farewells in guttural Sioux, mounted the horse and took the trail in an opposite direction from that which he came. We trotted slowly off while within sight of the camp, but when a mile was placed between it and ourselves, and we were hidden from view by intervening bluffs of cottonwood, our pace became as rapid as we could well sustain.

I had repeatedly asked Lavie what the trouble was, but had thus far obtained no answer, but a short 'drive on, drive on;' but he now rode along side the cart and told me in hurried and excited French that had we remained much longer in the village, the Sioux would have killed me; at the same time blaming himself for having brought me into the danger as he was aware that I had indirectly aided Major Hatch—a fact which the savages evidently also knew. Nothing more was said on either side, I being occupied in thinking over my escape, and Lavie engaged in urging on the horses and doubling the bluffs in a fox-like manner.

It must have been nearly ten o'clock when we left the Sioux village, and we kept up our tremendous pace until about three in the afternoon, only stopping once to change the position of the horses from cart to saddle. From the silence of Lavie, who was usually talkative, I argued that he feared the savages would follow yet, and attempt my destruction; and this thought so worked upon me as to render me extremely nervous and excited. My hope however, lay in the fact of the Indians having no horses, and our consequent ability to outrun them. I was unaware at the time that we were following the base of the hills, which here make a turn like a horse-shoe, and that the savages could, by crossing straight over the hills, overtake us.

The horses were showing signs of great exhaustion, when we halted by a timber bluff, by the side of which was a small pond, some twelve feet in diameter. The water in this pond was very shallow, and some two feet below the surface of the plain. The bluff of timber was about thirty feet in length and fifteen feet through, of small cottonwood trees, standing so thickly together that though when on the border of the bluff, one could see through it to the prairie beyond, yet he could not be seen himself at the distance of one hundred yards.

After turning the horses out to grass, and while discussing a cold dinner, Lavie assured me that we were far enough now beyond the reach of the Sioux, but that in order to make assurance doubly sure, he proposed traveling on into the night, as soon as the horses were sufficiently rested. He explained his

having taken the opposite direction from that whence we came, in order to mislead the Indians, but that he intended to double back that night, to the head waters of the Oak River, and from thence to the place of meeting with Johnny. Under these assurances, my excitement was quieted so that, after a rest of an hour or more, Lavie started after the horses; I was quite restored, save the nervousness arising from the events of the morning.

"I lay upon the ground, smoking for some time, after his departure, when I began to wonder what was delaying him so long. Rising to my feet, I went beyond the end of the bluff to obtain a clear view of the prairie. I had just passed the last trees, when, to my horror and consternation, I saw beyond the nearest bluff, and stealthily approaching it, three Sioux Indians, with painted faces and guns in their hands. Their plan, evidently, was to reach the bluffs and descend upon me at the first good opportunity. They saw me, however, at the same moment that I discovered them, and, avoiding all effort at concealment, ran boldly for the copse. I ran at once for my rifle, and plunging into the bluff, penetrated to the outskirts of the side facing the copse, which concealed the Sioux. Here I lay down among the shoots and twigs, almost beside myself with fear, and trembling in every nerve.

"The situation now stood thus: Three Indians bent on murder, concealed in the cottonwood bluff; and one nervous and excited white man, hidden in another copse, with an intervening space of about 600 yards between them.

"I peered anxiously toward the bluff which con-

cealed the savages. All was still; nothing could be seen. My rifle would easily carry that far, could I see an Indian and control my nerves sufficiently to take an accurate aim. I endeavored to calm myself and to think rationally what course of action to pursue. It was clear that I must act on the defensive altogether, and that if I could hold out until Lavie came, all might go well. But a vague fear that perhaps he had deserted me, or had fallen into the hands of the Indians, already possessed me. It was plain there was no way for the savages to attack me but by charging over the open space, when I could get at least one shot, if not two. But then what? Still, I argued, that knowing my rifle to be a repeating one, and themselves armed with the common trading guns, they would not attempt a charge. And then I knew the savage character sufficiently well to believe they would not attack without a decided advantage. True, they might separate and approach singly from different quarters; but still they would have to come over the open space where I could get a shot. These thoughts passed through my mind instantaneously, while I intently watched the opposite copse. There was not a sign of life in it.

"Five—ten minutes passed, without a sound. The suspense was awful. All my senses were preternaturally acute. I remember feeling an ant crawling over my hand with a sensation that made my flesh creep. I fancied I could hear it crawl. There was a small scarlet flower springing from a light-green stem near the front side of my rifle. It seemed to me that I needed no microscope to count

the minutest vein in its petals. I could distinguish the slightest motion of the leaves in the neighboring hammock. I was lying on my face, with the gun extended in front, ready to use. I raised it every few minutes to try my nerves and ascertain if I could fire with accuracy, when the moment came. But I was more shaky than ever, and feared lest I should fail altogether.

"I was engaged like this when I saw a sudden flash issue from the bluff where the savages lay concealed. A sharp report followed, and a ball exhausted its force some distance in front, but in a direct line of me. It was evident they knew in what portion of the copse I lay hidden. . But why fire when they knew the ball would not reach me? Possibly to attract my fire in return. But they knew I had sixteen shots without reloading. I became almost paralyzed with a sudden fear that the Sioux were approaching from different directions, and that this was the signal to charge. I started up and peered through the trees in all directions, but discovered no one. What could it mean?

"I am probably no greater physical coward than the majority of men. This was not the first time, either, that I had been under fire. But I had always been in company with others when so placed. I was fully determined to fight the Sioux to the bitter end. But I confess I was almost beside myself with sheer fright. If they would only show themselves, or give me an inkling of their plan of attack! This silence and mystery was infinitely more unendurable than any open charge. I resolved to return the fire, then I thought it useless, as I had no definite



object to shoot at. I cursed Lavie for having left me alone, and mentally accused him of having done so advisedly. I pictured to myself how I would look before sundown, lying stretched out on the prairie, my body riddled with shot, my scalp torn off. To this feeling succeeded one of sullen apathy; I was a dead man, but I would kill before I died. I thirsted for blood; I would fight to the last gasp. This feeling was better for me, and I grew calmer and my nerves steadier.

The afternoon was intensely warm, and I had just wiped the perspiration from my face, and changed my position slightly, in order to elevate my rifle, when from the ends and center of the bluff came the three Sioux, charging, with loud yells, toward me. My gun was pointed toward the end of the bluff, from whence the shot had issued, and without materially altering its position I fired. The Sioux plunged forward on his face, and I knew I had but two enemies to meet. But they were coming with fearful speed toward me. By the time I had reloaded, and risen to my feet, they were within sixty yards of me, and had their guns pointed to fire. Strange to say, I was calm, now that the exciting moment had arrived. I fully expected to die, but I would fight. Scarcely pausing to take aim, I fired at the foremost savage, and then incontinently fled. As I did so, I felt a sharp blow upon the knee, as if it had been struck with a stick, and I knew I was hit. I ran, however, for the pond, not knowing whether there were two foes to fight or only one, and plunged in, lying flat under the bank. If there were two Indians, the guns of both

were empty, and I at once raised my rifle and head above the bank to find out. I saw one Indian, something more than half-way through the bluff which impeded his progress; but he dropped to the ground—our eyes met.

My situation was now worse than before. I could not raise my head above the bank without attracting the fire of the Indians, who were on a level two feet above me. If there were two remaining, one of them could easily and with safety approach from the rear, and shoot me. And whether there was one or two, they were only twenty or twenty-five yards distant. The seconds in that moment of time seemed ages. The sun flamed down on me with intense heat. To add to my despondency, I felt the warm blood trickle from my wounded knee, and a sharp pain running through it. The suspense was agonizing, but I was resigned to what I conceived to be my inevitable doom. A thought suggested that by raising my hat above the level of the bank, I might draw the Indian's fire, and gain an opportunity of returning it, while their guns were empty. The ruse was successful. I raised the hat and a bullet passed through it. But only one shot was fired, and I dared not raise my head lest its fellow should kill me. So I lay still with the muzzle of my gun above the bank, awaiting the final charge of the Sioux. But they seemed in no hurry to risk a charge.

"Sound can be heard when the ear is placed close to the earth, incredible distances. Stretched out as I was, with every sense exerted to the utmost tension, I suddenly fancied I heard a rumbling noise.

The sound grew more distinct, and resolved itself into regular beats. A moment more, and I distinguished the clatter of horses' hoofs striking the prairie sod. I scarcely dared hope it might be Lavie, when the sound suddenly ceased, and I heard my name called. It was Lavie's voice, and I shouted in return. I told him there were two Sioux in the timber bluff. He answered me in French, telling me to lie still, but to be ready to jump.

"I now became, not a participant, nor a spectator, but a listener to events. From the sound, I judged Lavie to be about 100 yards distant. I heard the sound of hoofs moving in the direction of the open space between the two bluffs, where the first Indian had fallen, but they did not pass into it. Presently they returned, evidently toward the rear of the pond, where I lay. Then they ceased altogether, and I heard Lavie shout in his patois—'Ah, Boy, you got two of them, eh?'

"I cannot describe the sensation of relief which came over me at this assurance, that but one Indian remained. I shouted to Lavie that if two were dead, there remained but one in the bluff. He told me, in reply, to be quiet, and a moment later a ball whizzed over my head into the timber.

"Lavie was armed with a breech-loading carbine, which carried eight balls. He had, also, an extra tube, containing as many more. He continued firing into the bluff, until he had discharged fourteen loads, firing from near the prairie level. During the fusilade, I lay still on my face, though ready at any time to act. Finally, satisfied that no living thing remained in the bluffs, Lavie reloaded, and

keeping his horse between himself and the copse, advanced to the pond. He told me to jump suddenly up and get behind the horse. This I did, though at the cost of great pain from my knee.



INDIAN MOTHER AND HER CHILD.

Then we moved off a distance of 100 yards, and, taking positions for a cross fire, raked the bluff again thoroughly, with our breech-loaders. It was unnecessary, however; the Sioux had probably fled.

Lavie informed me that the horses, which had

evidently been driven quietly away by the Sioux in order to separate us, had gone to a marshy pond at some distance, and one of them had mired in attempting to reach the water; that he had been employed all the time in extricating it from the swamp, and had only heard the last shot of the Sioux, when close enough to see the flash of the discharge. But he assured me he had not been gone for over an hour. It seemed an eternity to me.

"No time was lost in leaving the spot. We headed for the source of Oak River, and traveled on far into the night. When the morning dawned, I found my knee, which had been loosely bandaged, so much swollen and so painful, as to threaten a serious result. In view of this, Lavie pushed directly on for Fort Ellice, in which hospitable shelter, having left me, he returned to meet Johnny. I was laid up a month with the wound. At the expiration of that period, I again joined Lavie and continued in his company until late in the fall, hunting and trading with much success, but never again venturing into the vicinity of the Riding Mountains.

"I thought I had finished my wanderings in the wild regions of this continent; but here I am taking my first watch while you gentlemen should be sleeping."

The fire was replenished. The company repaired to the tents, while Barstow culled his floral specimens, which I volunteered to assist him in doing.

CHAPTER X.

A Buffalo Hunt—A Friend's Picture—Discourse about Birds.

Camp life under present circumstances was altogether a novel experience to some of us, but the fatigue of the day was followed by a night of quiet and refreshing slumber. The distant sounds of coyotes, or the cries of night birds in the copse in which we were encamped, did not disturb us in the least, and it was not till an hour after sunrise, that we were summoned to an appetizing, if rather simple breakfast.

Early in the day, while Mr. Barstow was arranging his herbarium, Mr. Warrington was trying his luck with a fishing-rod, and others of the party were less profitably employed. Pettibone, who had been absent for an hour or two, returned to camp with the gratifying intelligence that a vast herd of buffaloes were grazing at some distance to the eastward, affording a fine opportunity for a chase. Looking in the direction indicated, we beheld in the distance what appeared to be a stretch of woodland, but the distance was too great to permit us to distinguish any single object, and to our vision there was neither life nor motion in the dark extending line to which Pettibone directed our attention; a field-glass, however, confirmed the information he had given; not a moment was lost in the preliminaries requisite, and we were all soon in the saddle.

The success of the hunt must necessarily depend



upon both skill and caution. Warrington was as new to the business as myself, but the other gentlemen of the party were veteran hunters, and we deemed ourselves fortunate in thus having an opportunity of observing the mode of procedure by adepts. We did not make a direct charge, which would have resulted in inglorious failure, for the wind was rather fresh from the northwest, or in other words, from our point of the compass towards the huge beasts, but making a long detour, we were able to approach the herd from the southeast. Of course there was no timber or aught else to cover our advance, so there was no alternative but to charge directly down upon them, trusting to the speed of our horses and to our accuracy in firing. We were all well mounted, and armed with the best of rifles, but our horses were as yet untried in the chase.

This herd might or might not have been the very one we had seen from the railroad, but in either case the animals quickly perceived our approach and fled, the very ground trembling beneath them. Onward we dashed, at the utmost speed of our ponies, but we were yet at too great a distance to fire upon the game. We gained upon the frightened creatures, and were soon within rifle range. It was an exciting chase, and it became very evident that our ponies were accustomed to such work, for they betrayed no indication of fear. Warrington was the first to fire, but his bullet would not have hit the broad side of a country barn had he been firing at one at twenty paces, and as he was a better shot than I, the herd might have quietly paused to graze,

for all the harm we have should have done them, I suspect; but not so the others. Their fire was accurate, and the result most disastrous to the buffaloes. One, two, three, fell to the earth beneath the unerring fire, but not till the chase had been continued for a long time. Merely to wound and cripple the game was not for men of their experience and skill. They had reduced the work of killing to a fine art; their bullets went directly to the most vulnerable and vital part, and the victory was complete.

It would have been downright cruelty to have longer continued the slaughter, for we had neither need of the beef nor facilities for its transportation. Contenting ourselves, therefore, with selecting the best portions for present use, we left the carcasses for the coyotes and carried our first trophies of buffalo hunting to our camp, where the meat proved a timely acquisition to our cuisine.

While others passed the rest of the day in fishing, Barstow, Warrington and I made a foray upon the feathered tribe, whenever desirable specimens presented themselves, for our English friends were especially anxious to obtain a good collection of American birds and flowers.

Warrington, as I should have said earlier, was a cultured gentleman, full of good nature, as his jolly, rubicund face, his rotund and bulky form, and the merry twinkle of his eye would indicate. He liked a good dinner, enjoyed agreeable society, and was never more delighted than when smoking his cigar and arranging his specimens. His jollity and good humor was perpetual sunlight. There are persons

in this great world of ours, who cannot laugh—whose convulsive efforts to do so are abortive, and in which there is no more music than in a cracked clarionet—whose sheet-iron faces seldom relax their rigidity, and whose very glance would freeze a smile in the most genial heart before it could find expression on the lips; but the sight of Warrington's twinkling eyes and jolly face, and the sound of his musical laughter—running through a whole gamut of explosives of merriment, is the very best remedy for the "blues." It was always fair weather, rose leaves and sunshine with him, and his felicitous disposition made him a universal favorite with the company, who never wearied of his quaint discourses upon the birds and flowers he handled so tenderly, and which he never deprived of life without first asking the pardon of his victims for doing so. At evening he examined his prizes with all the satisfaction with which the miser counts his gold, and taking up one specimen after another, he gave us, in his peculiar and inimitable manner, much interesting information concerning it.

"However much we may be indebted to scientists for our information as to the varied, beautiful, and wonderful works of God, we cannot but regret that analytical research is ever a godless Vandal, eager to separate vital wheels, and unable to re-animate the beautiful mechanisms it has destroyed." So would he discourse.

"To the ornithologist, gun in hand, the most exquisite songster of the orchard, or glen, is only valuable as a 'specimen;' and while we avail ourselves of his classifications and descriptions, we must still

be permitted to enter protest against any and every one of his wanton destructions of innocuous bird-life. The delicate warbler, equally with the 'sportsman,' is sentient; it has every attribute of organic soul, and this, in the erudite classification of the scientist, is the only part not noted—for analysis ousted,—*it is the whole bird*, the residuum of bone, flesh and feathers, having no particular value, except as memorial trace of a flown ideal grace, exceptional attribute, and divinely-planned beauty that called for pity, and whose wreckage, because it was fair, is a mournful satire on the admiration of man.

"That the soul of the bird is a divine emanation, separated and fallen from the paradisiacal life-tree of which it is a floating leaf, is the most beautiful as well as the most plausible theory of its existence. Its plumage and form are incarnate grace, its commonest motion the ideal one of flight, its only language music! In its instinctive obedience to law, of which it has no self-conscious knowledge, its inspirations of soaring and song, its prophetic anticipations of the seasons, and migrations as certain as the tides, are shadows of divine consciousness; and that modern science, while declaring that the bird or beast of itself has *no soul*, should utterly ignore the palpable deity incarnated in the animal spheres—a principle the astute Egyptians and other ancient scientists fully recognized—is proof, not so much of the acumen of the age as of its atheism.

"Overlooking this principle, ornithology has overlooked some vital lines of classification, but none the less, its arrangements are ingenious and exhaus-

tive. It does not, as our first conception of its work would lead us to expect, classify to any extent by attributes, habits and diet, not even with any particular regard to size, but arranges the species on a basis of mechanical construction, by peculiar characteristics of the feet, bill, feathers, etc. These differences, in justice to science, we should say, are such as have been found definitive, being a sort of Creator's *label*, and the species are probably more generically classified in this way than they could be in any other.



“ That birddom, in its fallen estate, is a theocracy, is a theory that a predominance of predatory habit and carnivorous diet most emphatically controverts. To all intents and purposes it is a republic, with

balances of power nicely adjusted. The wording of science makes it a 'kingdom,' and poetry has long assigned to a well-known bird the crown and oft-contested scanty perquisites of a savage royalty.

"Though there are some larger, and many handsomer birds, there are none for whom we should ever expect to see the *Eagle* by either Science or Poetry decrowned. Emblematical of Liberty and Empire, the founders of the great American Republic, who adopted this kingly soarer from the heraldry of other realms, had they wished for an entirely original emblem, would have looked in vain, on earth or in the heavens, for another so suggestive. Of this bird, there are in the world about seventy known species. They are of the order of *Raptores*—specific family, *Aquilinæ*. The especial eagle of Columbia, whose caricature is flung to a million breezes on the American Republic's striped bunting, is the Bald Eagle, one of the most tameless and plucky of all the many varieties,—scientific title, *Haliaetus Leucocephalus*.

"These princes of the bird kingdom are rarely seen in any inhabited locality, their safety depending on their seclusion. An occasional 'specimen' is secured, but the bird itself is rare, the family not prolific; and as the flag of whose heraldry it is a component part, does not concede any 'rights' of either citizenship or hospitable courtesy to it, this old crown-wearer and standard-bearer of pompous earthly empire is in a fair way to become, to the golden ages of the future, what the extinct mastodon and ichthyosaurus are to the erudite fossil hunters and scientists of the present.

“As the eagle, though not without its virtues, is a bird of prey, let those mourn who will,—it is, in common with all slayers and animal food eaters, a ‘golden age’ antagonist, and as such, while still deprecating its slaughter, we must sadly own it richly deserving of the fate its rarity already foreshadows.

“The eagle ranks in ornithology as first cousin to some disreputable denizens of bird-dom—to the owl, kite, chicken-hawk, carrion crow, turkey-buzzard, etc. All these, though of different families, being of the order *Raptores*. As his aquiline majesty can not, by habits any way superior, give the lie to ornithologists’ unflattering betrayal of his plebian origin, we readily accept the fact of his humble relationships.

“The smaller birds of this order are always plenty, easily finding food and places of concealment, but before the advancing foot and gun of predatory man, the larger sorts are gradually disappearing. A genuine specimen of the great grey owl is almost as rare as the eagle, though one with ample muscle to carry off a lamb or turkey, is occasionally shot in the vicinity of some unfrequented glen, or large stretch of woodland. There are something like 150 species of owls—family *Strigidæ*. The larger varieties of these prey upon other birds and small animals, but the most are held to be fully as insectivorous as the robin.

“The birds of bad repute—eagles, owls, hawks, kites, crows, cormorants, vultures, etc., are not the only sinners of the winged race. Nearly all birds are either wholly or partially, carnivorous. The

most, while able to subsist and maintain perfect health on a vegetable diet, prefer the animal food, and while any subject creature exists that is edible and savory, will turn contemptuous tail upon any and all of God and Nature's insensitive and abundantly-provided vegetarian sweets. Even the pretty and seemingly beneficent humming-bird is no exception; for with a choice at his refusal of "a dinner of herbs with love" in the bells of a hundred flowers, he turns from all, to take as the daintiest of tit-bits, the sun-roasted, noon-drowsy fly or bee, that went down, as to a first table, to the deep-hid ambrosias of Flora before him.

"That the desire for animal food is a perversion of original nature, a result of some species of 'fall,' ought not to be doubted by any who accept as divine, the Mosaic revelation. It is doubted, however, by the most astute scientists; even the Darwinians, while admitting that all traits and appetites, equally with the organs, are evolutions, being fixed as the types, their theories fail to consider all evolutions a progression.

"The Humming Birds—ranked by ornithologists as among the Insectores—family, *Trochilidæ*—notwithstanding their hypocrisies of pretended beauty, love-and-honey diet, are among the most exquisite and admirable of the feathered tribe. They are exclusively American, and plenty at almost any range of latitude on this continent. There are, on an average, over two known species for every latitudinal degree from pole to pole, 400 distinct varieties, according to accredited authorities, not being considered too large an estimate! They are co-existent

with the insect—attracting, honey-producing floral kingdom, and are found at any latitude not too inclement for flowers. They are plenty in Kansas, and not hard to catch, but are easily injured by handling. If fed according to their acquired carnivorous habits, they can be kept in cages and domesticated; but almost all, who covetously entrap specimens of these exquisitely-vital animate sunbeams, are unaware that, fallen like the rest of doomed mortality, they are insectivorous.

“The Humming Bird’s nest is so small and so securely hidden, that it is almost never found. Once or twice in a lifetime one may be stumbled upon. It is the prettiest little curiosity out; most attractive when it is fullest—all the family from papa to the baby ‘at home.’

“The bird, like most of the winged tribes, is migratory, a follower of the floral wave as it fluctuates back and forth from its permanent base in the tropics, over the temperate, and for a short period even into the polar zones. The sweet breath of its favorite, insect trap, is probably the little migrant’s only trail; but, shrewd as it is liliputian, to whatever distance, as the seasons vary, it may wander, it never loses track of the way back, never misses the trains, and is sure to be on its native sward at the first grand floral opening.

“The loves of ‘Jenny Wren’ and ‘Cock Robin,’ have long been inscribed on ‘Mother Goose’s’ pages, a favorite legend of the nursery. Although far too good to be true, these birds being inveterate enemies, in some essential respects, they are sufficiently alike to comfortably wed. They are both

great gourmands, and carnivorous to a large extent.

pr“The Robin—*Turdus Migratorius*—is of a very
abundantly productive of grasshoppers, bugs, worms,
etc.—it is much admired as being on hand with the
earliest bug. The female is somewhat larger than
the male, but the male has the reddest breast, prob-
ably because his heart is the warmest. She has all
the vocal organs, and is, equally with her mate, able
to sing; but, in common with the males of other
species, he does the aesthetics, while she maintains
an appearance of decorous incapacity, oversees the
family, and spends her breath in twaddle. The
habits of the robin are well known. It is as easily
tamed and domesticated as a chicken, but eats with
a voracity that would breed a famine in any ordi-
nary poultry yard. A fledgling of this species de-
vours, on an average, its own weight in worms,
bugs, etc., every twenty-four hours, and will die,
after a day's deprivation, of famine. This gross-
feeding and very foul-breathed bird is invaluable as
an insect and worm destroyer, and being so recog-
nized, it is, in common with a goodly number of
other species, protected by law.

“Of the Wrens, there are numerous varieties. Though small birds, some of them have very pom-
pous names, for instance, one species is called *Campylorhynchus Brunneicapillus*. Another, *Thriothorus Ludovicianus*; and still another, *Thriothorus Berlandieri*. The little brown waifs, known as Snow-Birds—that come in flocks in the dreariest of seasons, brought in on the storm-wing, to alight with a cheery twitter wherever a yet unrifled seed-

stalk flutters above the snow,—are a species of Wren—*Troglodytes Hyemalis*. One of the commonest and best-known varieties is the shrewish little House-Wren—*Troglodytes Aedon*—whose scolding at all hours is easily explained, and very excusable, in view of the fact that the house-cat has for ever an evil eye on its nest, and the mousing, sleek terrier only awaits the fledgling's first out-tumbling and crippled efforts at flight to give chase, and snap the lamp of life out in every one of their little ragged breasts.

“One of the handsomest and sauciest, most admired, and equally with the robin, a much-enduring and early harbinger and sweet prophet of the Spring, is the wary and prolific Blue Bird—*Sialia Sialis*. This warbler is not seemingly so common as either the wren or the robin, and yet it is a poor rod of brown moss, greensward and briar-tangle that hasn't a blue bird. In the shadow it is easily mistaken for an ordinary songster, but with the sunshine squarely covering it, its origin is revealed.

“It is well known, being related in the first book, legendary Veda of bird-land, that great Juno once, being in haste, and without a ribbon or girdle at hand to confine her somewhat cumbersome drapery, tore a scarf out of the sky. This Vandalism, giving outsiders a somewhat unflattering view into Olympus—and, moreover, leaving an unseemly fracture—made old Jupiter angry, and he thundered, after the Olympian fashion; whereupon Juno contemptuously tore up her scarf and threw the bits at him. Amused at the saucy pettishness of one he greatly admired, the god smiled, and then the sun

shone out, and the bits of sky went fluttering and careening down to earth, and all turned into blue birds.

"There are various species of what have been termed by naturalists *Sialia*; our blue-bird, therefore, is a somewhat variable quantity, the type not being so distinctly outlined as is that of the robin and others, whose marital associations are limited to only one species. The female is not near so 'blue' as the male; probably aware of the fact that feminine blues are attractive only of the spear, not usually admired, and only exceptionally in demand. She is exemplarily domestic, would sooner swallow a caterpillar every five seconds than sing a note, and never presumes to lead the way, or take an initiative, except when on the trail of a katydid or a beetle; then, if she is able, she gets ahead, and gulps down her victim on the public arena, triumphant in gluttony, regardless alike of loves' courtesies and of decorum.

"Notwithstanding the disgraceful and distinctive fact that outside of an incapable and monotonous twitter, male birds do all the singing, if ever in the dewy morning, awakened, we are, by the shrillest of concerted pipings, made aware that the exquisite song-bird anthem of the dayspring, is all soprano. We hear in the young morn's breaking, not only carols, but all sorts of single notes and shrill twitters, and if the female bird ever sings at all, it is at the bidding of joy in the intoxicating delight of this social hour; but she necessarily twitters to the masculine pitch, being unable to find, inside the finite limits of appreciable sound, any higher, and therefore, strictly feminine octaves.



"There are some low bird-notes. Chanticleer's crow, as compared with the song-bird's warble, is a soft contralto; so is the crow's cry; and to the early bird-matinee, in any locality, by a carnivorous humanity inhabited, the former of these is never wanting. The owl, also, pipes a soft low note, not of itself unpleasing, and the pheasant, as often heard in wooded localities, is a good drummer, but these performers keep strictly to solos, and for any ordinary feathered concerts, fail to come to time. It is only at night-fall, when the last shrill whip-poor-will is singing, and the first owl of the season pipes a solemn 'to-who' of attempted trombone base, that we get any appreciable range of pitch, and a genuine feathered duetto. The owl and the whip-poor-will, however, are seldom heard together, the hoot of the former in the autumn woods being the wary whip-poor-will's signal of departure.

"The whip-poor-will—*Anastrostomus Vociferus*—is seldom a matinee singer, but does sometimes mingle his notes with other 'stars' of the morning, in his Maker's praise. His usual habit is to begin his melancholy cry, a little after nightfall, preferring, like the nightingale, to pipe

'When all the woods are still.'

"He is quite pretty as seen by starlight, or the rays of the crescent moon, and abroad at eventide, is neither chary of his notes, nor at all shy. With something of a soulful originality in his composition, he has apparently a penchant for investigation, and can be attracted by odd movements, to view which he will alight almost at the feet of an intruder, his shrill 'whip-poor-willie,' startling in such

close proximity, a manifest interrogation. As he is an eternal penitent, imploring chastisement, we will ignore his errors. He is the loudest of our night warblers, often confounded with the predatory night-hawk, to which both in habit and appearance, he is similar; he is a little larger than the robin, his plumage a rufous brown, marked on the wings and tail with a dusky white. The female is a little smaller than the male, and has no white markings.

"The lark is the whip-poor-will's and nightingale's antipode, and as representative warbler of the morning, is often quoted by the poets, and well known to fame. There are a number of varieties of this notable songster, some of which are of habits quite common-place, and no more given to soaring and song, than any other birds. The variety commonest in Kansas during the summer months, is the Meadow Lark—*Sturnella Magna*. This species is quite unassuming, has few enemies, and is prolific and abundant. Its nest, concealed in the early summer's timothy and clover, is seldom disturbed, but is sometimes come upon by an unwary foot on the future hay-mow trespassing. At such times, the bird flies up with a frightened flutter, leaving from two to four warm eggs, or helpless young ones, without covers, on a very rough and shiftless hay mattress.

"Though a pleasant little summer companion, our meadow lark, in its plumage of dull brown, is not particularly interesting, neither is the Tit Lark—*Anthus Ludovicianus*—nor the Red-Breasted Lark, *Tripialis Militaris*—nor the Finch Lark—*Chondestes Grammaca*—nor some others, all wearing the com-

mon cognomen, though of different families. The only lark proper—the lark of fame—the especial lark, whose habits have won for the name its reputation, is a Sky Lark, a European bird, not necessary to be described. This country has varieties, but the American Sky Larks are the common—*Eremophila Cornuta*—a very shy bird, seldom seen in inhabited localities, except in the winter, and a little known and rare species, christened by its discoverer as the Missouri Sky Lark—*Neocorys Spraguei*—a bird very similar to, if not the same as the European Sky Lark.

“The Sparrow family—*Fringillidæ*—can be found in every section of North America. It is of this bird that our Saviour in his sermons has spoken, and in some sections, and during our inclement seasons, it certainly needs that some pitying Deity should be conscious of its woes and have power to solace them. One of our winter birds, confounded often with the *Troglodytes Hyemalis*, is a sparrow—*Junco Hyemalis*. This is the Snow Bird proper, not to the common eye distinguishable from the Wren, though the species are quite distinct.

“The Snow Bunting of the Polar Sea—*Plectrophanes Navilis*—is a sparrow very much as to the modes of feeding and other habits akin to a little Chipping Sparrow—*Spizella Socialis*—of our mid-summer. A most interesting species of this family, is the Song Sparrow—*Melospiza Melodia*. This is only a summer bird with us, but a little further south, in Kentucky, Tennessee, and other of the middle range of States, it is a constant resident. In this latitude, it appears just after the blue

bird, black bird and meadow lark. As a vocalist, it rivals the robin, and can be heard from early dawn to nightfall, singing always the same strain, never by disturbing ambition or disgust at his own monotony goaded into the faintest attempt at unorthodox variations or originations.

"It is one of the most indefatigable of the insectivora, and never sings sweeter than after a full meal of wood-ticks, caterpillars and field-spiders. The Grass Finch—*Spizella Pusilla*—is another less interesting variety, quite common with us. The White Crowned—*Zonotrichia Lencophrys*—the Golden Crowned—*Zonotrichia Gambelii*—and the White Throated—*Zonotrichia Albicollis*—are all beautiful varieties, seen often in this latitude, both in spring and autumn, but only in flocks as passing migrants. This little bird, in all his varieties, equally with the Robin, is fond of small fruits, is easily tamed, especially in the winter, and children both in city and country, often amuse themselves and do a sweet deed of charity, by throwing it crumbs.

"The Prairie Hen is a species of Grouse, a very prudent family, who pay as they go, and never run long bills. They are excellent eating, as we now have an opportunity to demonstrate." Dinner being announced, the bird question and the birds were laid upon the table.

CHAPTER XI.

▲ New Encampment—Off for Colorado—Impressions of Denver—Topography and Resources of the State—History—Wonderful Scenery—The Garden of the Gods—Mountain Peaks and Ranges—Mount of the Holy Cross—Canyons, Cascades and Parks—A Perilous position.

We now struck our tents, packed our effects and resumed our journey to the West. Passing old Fort Atkinson, on the Arkansas, we at length reached the Cimarron River, where we encamped.

With all the game we desired, with delightful weather, and perfect health, we fully realized how little and how few of the artificial comforts of life are essential to health, to contentment, and to happiness, and ceased to wonder why the red man so pertinaciously clings to his natural mode of life, refusing to exchange the free gifts of Nature for the restraints of civilization. We kept our records, made our sketches, collected and arranged our specimens, and pursued our pleasures. At night our camp-fire burned brightly before our lodges. The cries of the night-birds, and the howlings of wild animals, was our lullaby, and, though at first we fancied that their voices did not chord perfectly, and their strangeness rendered us vigilant—perhaps a little nervous, especially at midnight to hear the crackling of the dry underbrush in close proximity to our beds, to know that it was caused by some wild animal in quest of food, and to feel that the creature might, perchance, extend his explorations beneath the canvas that covered us,—we soon be-

came accustomed to these sounds, and would have missed the somewhat discordant music, regarding its cessation a real deprivation; but in this respect we were never unfortunate.

Some days we met with little, roving bands of English-speaking Indians, who had picked up enough words of the language for practical needs, in the white settlements, whither they went to sell their peltries or exchange them for guns and other articles, and to drink the "fire-water" of the white men, with all the complacency and appetite of veterans in the business. Whenever we met them, we never failed to experience proofs of their good will and hospitality.

But the days were gliding by, and however Arcadian our existence, it became necessary for us to move on and move quickly, if we would extend our explorations of the West, which Barstow, Warrington and I proposed to do. As the other members of the party preferred to still longer follow the chase on the plains of Kansas and the border of Colorado, we took our leave of them with the understanding that we would meet at Leavenworth at the expiration of the time to which we had limited ourselves on leaving Topeka.

A few days of rapid travel northward, and we crossed the Arkansas, and arrived at a station on the Topeka & Santa Fe Railway, which passes through the central part of Hamilton County, and westward to Pueblo, Colorado, whither we proceeded without further delay, having sent our ponies and trappings to Leavenworth.

Railway travel offers in exchange for the rural

and nomadic enjoyments experienced, practical and stern realities of life.

From Pueblo we went direct, via the Rio Grande Railway, to Denver, the capital of the State.

Denver is a fresh-looking, rapidly-growing city, well spread out over a portion of a very large and sandy plain, sloping down to the South Platte River, and containing, perhaps, 25,000 inhabitants. It has an elevation of 5,244 feet above the sea level, and is fourteen miles distant from the "foot hills." The business portion of the city is built of brick, and many of the business edifices present an imposing appearance. It has a great number of churches, several street railroads, four excellent daily journals and a United States mint. The value of goods annually manufactured here, reaches several millions of dollars; the flour trade alone somewhat exceeds one million. The streets are wide, and for the greater number, lined with a young growth of cottonwood and box-elder trees. The residences generally have lawns or yards in front, adorned with flowers and shrubbery. All these grounds depend upon irrigation, as in fact does all vegetation of this region of country. All departments of industry appear to be fully represented here, and the professions seem to be over-crowded, but as Webster said, "There is always room enough in the upper stories." Denver is the leading railway center in this "Far West;" no less than five railroads concentrate here. As late as 1869 there was not a mile of railway in the Territory, but to-day there are 1,237 miles, in the aggregate, of the various lines—the Atchison, Topeka & Santa Fe, Denver & Rio Grande, Denver

Pacific,—from Denver to Cheyenne, 101 miles, connecting with the Union Pacific; Denver & Boulder Valley; Denver, South Park & Pacific; Kansas Pacific, Union Pacific,—having however, only nine miles of track in Colorado, but by connections, forming a through line; Colorado Central, the first organized in the State, a branch of the Union Pacific, passing through the gold and silver regions. In some places the railroads have a grade of 315 feet to the mile. The Denver & South Park railroad passes on the top of Kenosha Pass, 10,139 feet high, affording a delightful view of the South Park, 3,000 feet below. A route is now being surveyed in Southern Colorado that will cross the mountains over 12,000 feet above the level of the sea. The citizens of Denver are eminently enterprising, and fully impressed with the idea, in which the tourist can not fail to concur, of a very promising future for the city.

Of course there are no old residents here, for the city dates its first cabin in 1857 or 1858. There are plenty of hotels and boarding houses, both reasonable and dear as to rates. Houses and vacant rooms for rent are everywhere seen, and “lots” of land are for sale in unlimited numbers. It would be wisdom in “the City Fathers” to convert some of the vacant ground into parks. All persons, and invalids especially, need a pleasant place of resort out of doors. Many who come hither soon get discouraged; not feeling it safe to venture to the mountains, they lounge about the city, like prisoners, and discuss their ills with each other, and hence make comparatively slow progress towards recovery. They

come here, generally, ignorant of what is needful, and how to attain the advantages of location and climate—often ignorant of their real condition and its requirements. For lack of practical instruction concerning these matters, many, perhaps the greater number, who go abroad in quest of suitable climatic influences, agreeably to the home physician's oft repeated injunction, utterly fail to attain the advantages and benefits sought.

The adjacent country, of which views may be obtained from the city, presents a scene of indescribable grandeur and beauty—pictures of loveliness, into which enter lofty mountains, majestic rivers and delightful valleys. Mt. Torrey, Gray's Peak, Mt. Rosa, Mt. Evans, of the eastern range, and Pike's Peak, Long's Peak and Mt. Lincoln, rise in sublimity and grandeur to the height of 14,000 feet above sea level.

The Snow range of the Rocky Mountains stretches along on the western side. The mountains appear in comparatively close proximity, but in reality they are from forty to fifty miles distant. They rise to an altitude of from ten to fourteen thousand feet above the level of the sea. Snow is plainly visible on their summits and sides, with the cloud as its only companion.

Denver is the gateway to all the marvelous scenes of this new and prosperous State.

Colorado Territory was constituted in 1861, being formed from portions of Kansas, Nebraska, Utah and New Mexico; it was admitted to the family of States in 1876. The first white settlement was

made in Gilpin County, in 1858, and so rapid has been its growth, so great its enterprise and prosperity, that in 1877 it had nearly 200,000 inhabitants, nearly two million acres of improved lands, and annual productions to the value of twenty-three millions of dollars. In 1870 there were only 95,594 acres of cultivated land in the Territory.

The region of Colorado was known to the people of Europe prior to the settlement of New England or Virginia, having been first visited by white men in 1540, by an expedition from Mexico. For more than three centuries, Colorado west of the Rocky Mountains was nominally a part of the Spanish and Mexican possessions. By the treaty of 1848 the United States secured title to this region. The country north of the Arkansas River and east of the Rocky Mountains formed a part of the French possessions, and was included in the Louisiana purchase made in 1803. Three years subsequent to this transfer, Lieutenant Z. M. Pike, with an exploring party, passed through the mountains, from north to south, and discovered the lofty, snow-capped peak which bears his name. In 1820 an expedition commanded by Colonel H. S. Long visited this Territory; in 1842-4 the region was explored by Colonel J. C. Fremont. In 1852 gold-hunters discovered the precious metal in Clear Creek, and miners' tents became very numerous in that region. In 1858 gold was discovered on Dry Creek, a few miles south of Denver, and the following year it was found in Gilpin County. Early in 1859 the county of Arrapahoe was organized; and from this period onward the growth and prosperity of Colorado has been remarkably rapid.

In the early days of the Territory, a class of ruffians, who always infest mining regions, came hither, but the salutary influence of a vigilance committee quickly improved their morals, and law and order was completely and permanently established.

The boundaries of the State are the 37th and 41st parallels of north latitude, and the 102d and 109th west longitude—forming a parallelogram. On the north are the grazing lands of Nebraska, and the silver hills of Wyoming; on the east, the broad prairies of Kansas and Northwest Nebraska; upon the south are New Mexico and the Indian Territory; and on the west is Utah.

The State is 380 miles long, by 280 miles in width, having an area of 106,500 square miles,—66,880,000 acres—considerably larger than the whole of New England, New Jersey, Delaware and Maryland combined, which may be fairly regarded as rather a sizeable State, and as its entire population is less than half of that of Chicago or St. Louis, it would seem that there is still room for a few more.

The Rocky Mountains extend from north to south through the centre of the State; the three parallel ranges, with peaks mantled with snow, rising almost three miles above the sea level, enclosing the great parks—the most valuable agricultural division. The State is naturally divided into the mountain regions, the foot hills and the plains.

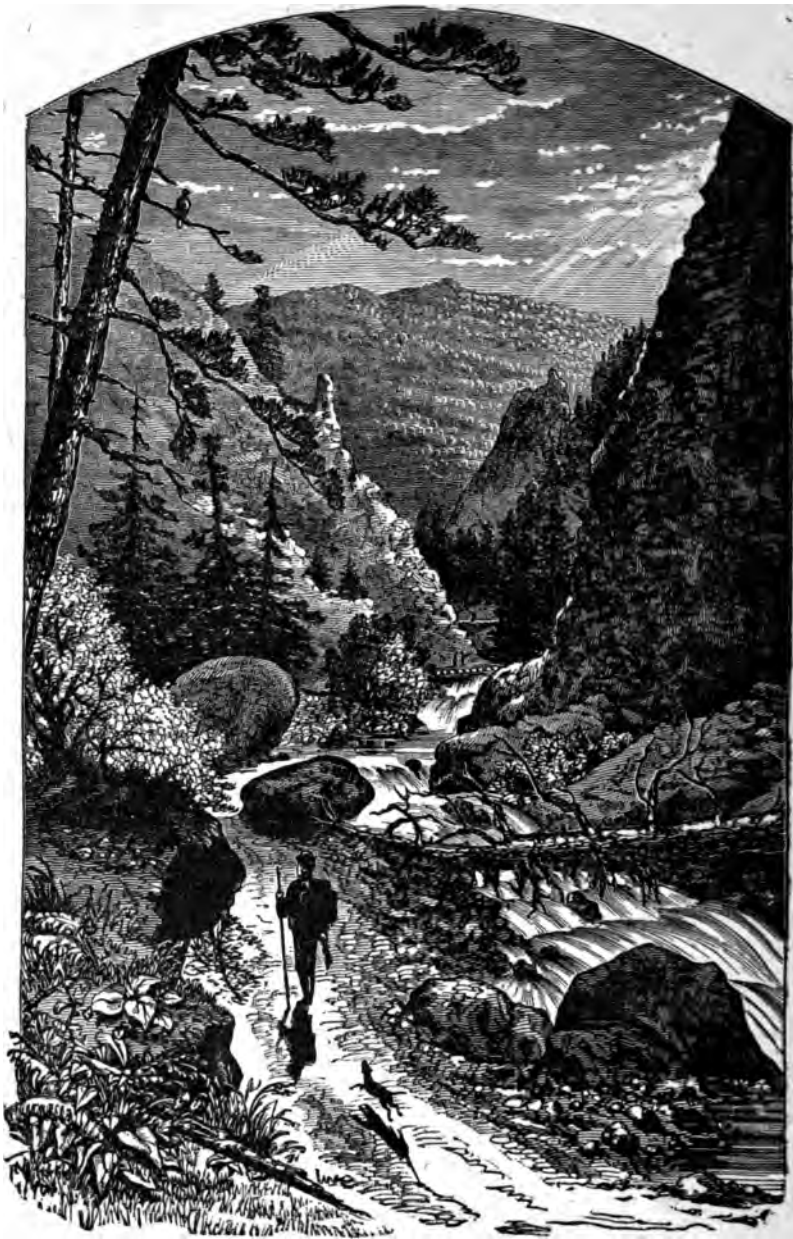
The western ranges of mountains are covered with great forests of timber, chiefly pine, larch, spruce, and fir. In the western part of the State is also found hemlock, cedar, cottonwood and other varieties.

From latitude 38 degrees 30 minutes to 40 degrees 30 minutes the chain of the Rocky mountains is, perhaps, 120 miles broad, and consists of three parallel ranges running northwest. The eastern range known as the Front or Colorado Range, rises abruptly from the plains east of Denver. West of this range, and separated from it by the great Parks, is the Park range. It is stated by several authorities, that these mountains contain more than twenty peaks that are over 13,000 feet high. The Blue Rio group include Mt. Powell, which attains an elevation of 13,300 feet. The third, and by far the greatest of this magnificent mountain chain, is about twenty miles west of the Park range, and runs parallel with it; the Arkansas Valley, lying between. It forms the great continental line of division between the Atlantic and the Pacific portions of the State.

The general height of these stupendous mountains is over 13,000 feet. Grand Mountain, La Platta, Harvard, Yale, Mt. Elbert, and the Mount of the Holy Cross, attain a much greater elevation. The Elk Mountains form the western spur of this range, and contain Mt. Sporis, the Capitol, the White House, Maroon Mountain, and Castle Peak, all of which are over 14,000 feet high—2,000 feet above the snow line, and, therefore, at all seasons of the year covered with snow.

There are many other mountains, including the Raton, Sierra, San Juan, Sierra La Platta, Uncompahgre, Sierra San Miguel, Sierra Escalante and others, which attain a very great altitude.

The average elevation of the foot hills, in the



THE BOULDER CANON.

southwest, is about 8,000 feet; the summit of the range 11,500 feet; the timber line 12,000 feet. There are, in Colorado, eighteen peaks that rise to 14,000 feet above the sea level.

The eastern plains occupy rather more than a third of the entire area of the State. The foot hills at the base of the mountains are interesting to the tourist.

The South Platte, between Montgomery and Denver, a distance of 125 miles, has a fall of over six thousand feet, while some of the canons of the Arkansas rise to the height of from 1,500 to 2,000 feet above the bed of the river, which is hemmed in by precipitous rocks, forming a scene wild, picturesque and grand beyond description. It is impossible to fully conceive this stupendous height without actual observation. The lofty spire of a church rarely exceeds 200 feet; let the reader fancy one such spire above another, till he has reached a height of ten, and he will begin to comprehend the meaning of the figures so easily written, which, without the aid of comparison, would be inadequate to convey a just idea of this vast height. Having, in imagination, carried up the ten spires, let him rest for a moment upon the summit of the last, and peer down into the swiftly rushing waters below, and his idea of the Arkansas at some points, will enable him to comprehend the description. Wild, awful, sublime, picturesque in their fullest and broadest significance, are words requisite to convey even a tolerable idea of the scene to a person who has never beheld it. For a just conception of the terms sublimity, grandeur, vastness and pic-



turesque scenery, the reader must behold the giant mountains of Colorado towering aloft till they pierce the skies, the canons nearly half a mile in depth, and the many natural features of this region of wonders.

A remarkable feature of Colorado scenery is the wonderful system of natural parks. These are vast, irregular plateaus, hemmed in on all sides by gigantic mountain ranges. The principal divisions which make up this great system, extend over a belt of country from forty to sixty miles in width, extending from the northern boundary southward to Fremont County, inclosing an area of at least seventy five million acres of the best and most fertile lands. The greater part of the country is watered by numerous streams, and is overgrown to a considerable extent by forests of valuable timber.

The North Park has an elevation of from 8,000 to 9,000 feet above the level of the sea, and embraces an area of not less than 25,000 square miles. Numerous tributaries of the north fork of the Platte course through this extensive region. On the south of this park, and separated from it by spurs of the great mountain range, is Middle Park; this embraces a tract sixty-five miles in length and forty-five miles in width, nineteen million acres of the best agricultural land in the State. A number of small streams that are tributary to Grand River flow through this park. On the east of the main range is South Park, bounded on all sides but one by lofty mountains; on the east of it are the foot hills. Its elevation is about the same as that of the North Park. It extends over an area of nearly a

million and a quarter acres, abounds in streams tributary to the South Platte, and contains salt springs of great value.



SAN LUIS PARK.

The great Southern Park—the San Luis—is separated from South Park by the main range of mountains, and is bounded on the west by the Sierra San Juan. It is equal in extent to all the other parks together, and in fertility of soil, wealth of mineral deposits, delightful scenery and salubrity of climate, is not unlike them. Through this park flow the Rio Grande del Norte and its numerous tributaries. The elevation of San Luis Park is 7,000 feet.

Monument Park, eight miles north of Colorado Springs, is notable for its picturesque scenery and singular beauty. Here may be seen fantastic groups of sand-stone, in shape of sugar loaves, occasionally surmounted by a large flat stone, seemingly just ready to fall; and there are massive stone columns, slender spires and obelisks of all varieties that, when viewed from a distance, resemble the columns and monumental shafts of a vast cemetery; and the illusion is rendered the more effective by the color of the stone, which varies from a grayish hue to snowy whiteness. To the fancy, it is the burial place of a host of giants, whose memorials defy the destructive power of time and the vandalism of man.

The Parks are supposed by some to have been deep lakes among the mountains, but the mountain barriers having been cleft with canons, they are now dry.

In the South Park, Fremont was hemmed in with snow and obliged to subsist upon his mules. In addition to the great parks already named, there are several smaller ones, among which are the Egeira and Estes, in the middle of the State.

In all parts of the country, the attractions for the sportsman are all that can be desired. He will find bears, cougars, wolves, and wild-cats in the mountainous regions; and on the plains, buffaloes, deer, antelopes, hares, rabbits, and many fur-bearing animals; wild turkey, mountain grouse, sage hen, prairie chicken, goose, duck, and swan are also numerous.

The view from Pike's Peak, the summit of which can be reached on horse-back, is perhaps the most

Magnificent that can be attained in any locality in the State—which, all-in-all, is a land of wonders. The peak itself rises from the edge of the great mountain range; to the west, are hundreds of mountains scarcely inferior in their altitude to this giant of the region; to the east and south, the eye revels in a panorama such as nowhere else reveals itself to human vision. Over thousands of square miles extend plains and valleys of unsurpassable loveliness, of gorgeous picturesqueness, over which roam countless herds of cattle; there, terrific yawning canons, and yonder, gleaming in the sunlight, little lakelets, flaming like the sun; there flow large rivers that have gathered their waters from mountain streams, that glitter and flash as they fall over obstructing rocks in their course; mountain sides and summits gilded by the sun's ever glorious rays; there, deep forests, with mantles of deep green—everywhere scenes of marvelous beauty and grandeur.

The "Garden of the Gods" is a delightful valley of perhaps five hundred acres, surrounded by high mountains and sandstone cliffs, an emerald of beauty with gorgeous setting. The traveler approaches it by a narrow passage between two rocky ledges, known as the "Beautiful Gate." The most peculiar and interesting features of this wonderful garden are a number of isolated rocks of soft red and white sandstone, some of which have a perpendicular height of from two to three hundred feet. Speculation may define what geologists evidently can not—by what freak of Nature these massive rocks were placed in their positions.

Similar wonderful features are found in Glen

Eyrie, one of which, but ten feet in thickness, towers aloft to the height of several hundred feet. In the Cheyenne Canon, five miles from Colorado Springs there may be seen many singular rock formations and numerous cascades and rapids.

Of all the great canons in Colorado, there is none which is in all respects so remarkable as the Grand Canon of the Arkansas. This most magnificent gorge through the mountains, rivaling in picturesque beauty and grandeur the Great Canon of Rio Colorado, and with precipitous walls of rock rising perpendicularly to the height of two thousand feet above the roaring, rushing river, is a scene never to be forgotten. Its entrance is just above Canon City, and it extends a considerable distance through the mountain ridge, presenting new beauties from every point of view.

Through the Grand Canon of the Arkansas a railroad has been constructed. Of this grand achievement of enterprise, skill and perseverance, a tourist says: "Few have an idea of the immense obstacles and difficulties that had to be overcome to build a road through this terrible chasm. Those who have not passed through the canon can have but a faint idea of the weird grandeur and awful magnificence of this great work of nature. Clear Creek Canon, Veta Pass and other celebrated spots in the mountains sink into insignificance when compared with this, the grandest of all the wonderful freaks of Nature's handiwork.

No man had ever passed through the wonderful gorge before the completion of the road, except during the winter when the ice had arrested the flow of

the turbulent Arkansas, which, however, was a rare occurrence, the current being so swift that ice could not form except in extremely cold weather. Tourists were accustomed to look down into the terrible gorge from the top, but it was not possible to get a clear idea in this way of the awful grandeur of the chasm and its extent and dimensions.

Persons on the first train that went through were spell-bound and unable to express their emotions of awe and wonder. The Royal Gorge, as the center of the canon is called, is the grandest and most wonderful spot in the world. An immense mountain torn open by some mysterious power, making a cleft that is from twenty to twenty-five feet wide in the narrowest part, while the immense rock wall rises higher and higher, until an elevation of *two thousand-two hundred feet*, is reached on both sides. Sunshine does not last long, even on the clearest days, in the bottom of this fearful gulf, and the beholder is impressed, as he gazes upon the scene, with the terrific strength of that awful power which at some remote period of the world's history sundered these masses of granite and porphyry rocks in twain.

Through the bottom of the canon, the Arkansas River roars and dashes over the huge rocks which, in many places, interfere with the free flow of its foaming waters, creating numberless water-falls and rapids. The entire length of the Grand Canon is but eight miles, and the Royal Gorge comprises four miles in the centre, where the canon is narrowest and the water the highest. The railroad enters the canon at Canon City, a small town of about 200 inhabitants, which has been the terminus of the rail-

road, and from here to Leadville stage lines were running. The road cut through the canon is a narrow guage three-and-a-quarter feet, and the small, narrow and light cars are well adapted for a road like this, that has an up-grade of fifty feet to the mile, and has continually to round curves on a narrow road-bed. The road is solid and firm, most of the grade being cut in the solid rock. The line is raised in most places, ten to fifteen feet above the surface of the water, and follows the sinuosity of the stream, rendering it very crooked. The rock through which the grade is constructed, is granite and porphyry of the hardest kind, and at some points this rock had to be blasted to a depth of eighty feet. In the removal of large masses of rock, portions as large as a large frame house came down and fell into the river."

Dr. A. C. Peale thus sketches several notable features of mountain and park scenery:

"We reached the summit of the low range bordering South Park on the east. From the pass through which the road crosses, we have a grand panoramic view. The entire park, about fifty miles long and twenty-five wide, lies spread out before us looking like a vast grass-covered plain beyond which rise the peaks of the Park Range, in which Buffalo peaks stand out most prominently.

"When we descend into the park we find that it is not a uniformly level plain, as we might imagine in looking down upon it. What appeared from the hills to be slight irregularities of its surface now resolve themselves into hills and ridges from 400 to 600 feet high. In the southern part of the park, there are numerous salt springs and marshes and low bottoms

covered with a white alkaline efflorescence. All the water in this part is impregnated with this alkali, as it is called, and is intensely disagreeable in taste. The general elevation of the park above sea level is about 9,000 feet.

"The mining center at present is the region along Mount Lincoln. Here on the very summit of the mountain, 14,121 feet above sea level, we find miners busily at work digging out the precious ores, which are loaded on the backs of donkeys in bags, one on each side, and carried to smelting works at the base of the mountain, 4,000 feet below.

"Work cannot be commenced until late in the spring, and even then the miners have to dig in the frozen ground, which in some places never thaws during the entire season.

"From Fair Play, which is the depot of supply for the mining districts of South Park, we proceeded across the Park Range to the valley of the Arkansas. On the west side of this river is the Sawatch Range, or, as it is sometimes called, the Snowy Range. It extends north and south, terminating at the north in the mountain of the Holy Cross. This is one of the finest ranges in the Rocky Mountains, and as far as is known, includes a greater number of high peaks than any other. In the grand panorama spread out before us from the summit of the Park Range, we have Massive Mountain, Mount Elbert, La Plata Mountain, Mount Harvard, and Mount Princeton, all over 14,000 feet in elevation, with many besides reaching to between 13,000 and 14,000 feet. The entire range was once the seat of intense glacial action, and the combined action of

ice and water has carved out deep canons and gorges in which the rocks are rounded and polished. Following the valleys of the creeks from the mountains down in graceful curves are long morainal benches. These benches are made up of boulders that were carried down by the glaciers.

On Lake Creek, near the base of Mount Elbert are the beautiful Twin Lakes. The lower is the larger, being a little over two miles in length and a mile wide. They are separated by a narrow strip of land, and between is a wide, shallow stream. Both are filled with trout and afford ample opportunity for pleasure to the angler.

Leaving the lower lake, we passed through the deserted town of Dayton, which has shared the fate of so many Western mining towns, and proceeding up Lake Creek, bade adieu to civilization. From this point we leave wagon roads and have only occasional trails. We struck out into a country unknown, save by the Indians and trappers and prospectors. Lake Creek, a short distance above the lakes, is in a canon, and it rushes over its rocky bed in a series of rapids and cascades. At one place there is a beautiful fall, and just below it the stream passes between two high rocky walls, which at the top approach each other, and in the chasm left between, a huge boulder has fallen forming a natural bridge.

"From the head of Lake Creek, we cross to Pacific waters, and following up Taylor River and Dead Man's Gulch, the scene of an Indian massacre, we find ourselves in the Elk Mountains. The Elk Mountain range is perhaps one of the most peculiar

and at least geologically interesting ranges in the Rocky Mountains. In it there are several eruptive centres—places where the granite has been thrust up and has broken through the overlying sandstones and other sedimentary beds. The stratification of the latter has given a step-like appearance and pyramidal form to many of the peaks. The granite peaks all have sharp, rugged summits, and vast amphitheatre-like faces, which in the past were filled with glaciers, as the Alps are to-day. Now, however, we have only snow-fields and little emerald-tinted lakes, frozen over the greater part of the year. The view of the Elk Mountains that we had from the summit of the Italia Peak was perhaps the finest we saw during the season, not only from its extent, but also on account of its variety. Italia Peak was so named from the display on one of its faces of brilliant red, white and green colors, the national colors of Italy. In the center of the grand panorama there spread out before us, we have the high, sharp and jagged peaks of a very light color, their amphitheatres filled with snow-banks. On the outside of this area, and rising in peaks equally high, we have the sedimentary beds. Here the form of the mountains is different. Instead of sharp peaks we find pyramidal forms. The color also in these varies. At the base we find ochre and orange-colored beds, and above them dark maroon sandstones gradually becoming brick red, and on the top of all, in patches, light yellowish beds of more recent origin. Thus we have variety, not only in form, but in color also.

“Teocalli Mountain is situated in the midst of

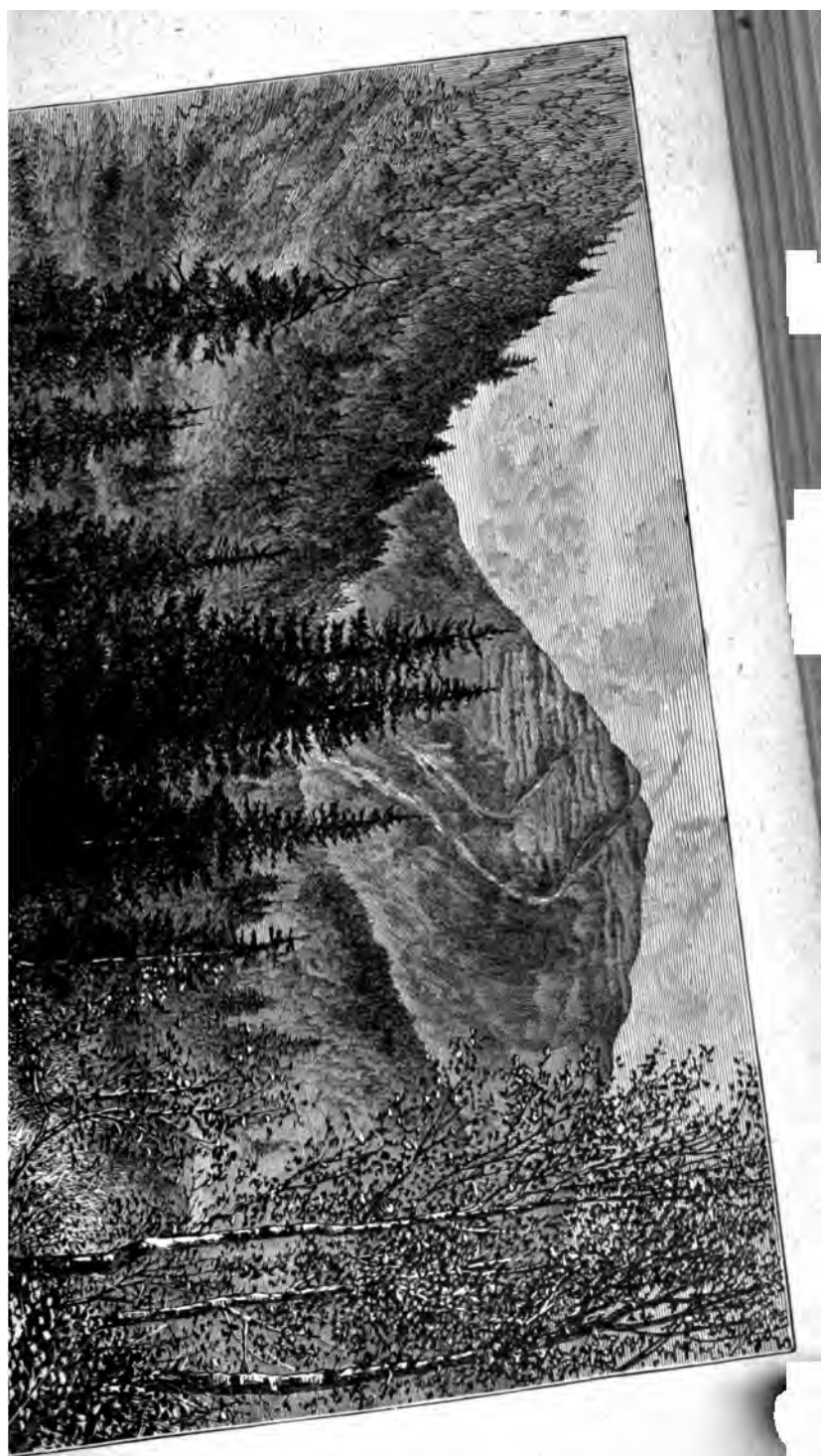
the Elk Mountain range, and is on the southern edge of one of the granitic areas at the edge of Teocalli Creek. It was named from its resemblance to the Asiatic Teocallis or Sacrificial Pyramids, on the summit of which human sacrifices were offered. It rises 13,098 feet above sea level. The lower portion is composed of granite, and is beautifully grassed over. It is in the upper third that the pyramidal form is most apparent. Here it is composed of stratified rocks, mostly dark maroon-colored sandstones, which at a distance have the appearance of a succession of steps, each one receding from the one below. When we ascend the mountains these steps, which from the valley seem easy of access, are found to be high bluffs cut by deep ravines and gullies, through which we have to crawl carefully, holding tightly to the projecting masses of rocks. Many of the cliffs are weathered into towers and castle-like forms."

In traversing another part of the country, we came, one day, to a canon, in the bed of which ran a very rapid stream, too unimportant to be designated as a river, whose rocky banks were almost as regular as art could have made them. From the brink, the roaring, seething, bubbling, rushing water was hundreds of feet below. The deep gorge was directly before us. Mr. Warrington espied upon the opposite side some new floral specimen which he desired to possess, and, though it seemed impossible to cross the gorge, as narrow as it was, it was determined that the attempt should be made. Proceeding for a little distance, following the line of the chasm, we found a place where a tall tree had fallen and extended across it.

The passage-way was now easy enough, seemingly, and if for a moment we experienced the least apprehension or doubt of the safety of the bridge, our confidence was restored on discovering evidences that other human beings or large animals had crossed before us; and without delay Barstow led the way and accomplished the undertaking as easily as he would have walked along a forest path. Warrington started to follow him. The entire distance was not more than fifty feet, but the limbs of the tree had become dry and broken, and there was nothing but steadiness of nerve and strength of muscle to sustain him, and that should have been enough, but it was not. Had he looked straight ahead all would have been well, but he looked directly down—down into the roaring abyss.

Pettibone had seen the danger from the first, and had advised him to allow Mr. Barstow to collect the desired specimens, since he was already on the ground, but Mr. Warrington was self-confident, and chose to pass over himself. Seeing the imminent danger to which the man was exposed, Pettibone now called to him to 'look up,' but again his advice was unheeded. The apparent hesitation with which he advanced though he did not speak, rendered it certain that he had lost confidence in his ability to proceed. Here on this mast, large enough and strong enough to sustain the weight of a dozen men at least, Warrington's alarm became so great that he could not advance another step. He called to Barstow, who was already at some distance in advance. Barstow discovered his friend's plight, comprehended the great peril, and tried to re-assure

him, but in vain. Had he brought his gun to his shoulder, given a command backed by a threat of firing, it might, perhaps, have cured his nervousness in an instant, upon the principle of *similia similibus curantur*, but he tried to convince the man of the absurdity of his alarm, and started to go toward him, too late, however, to be of service, for at that instant poor Warrington fell—not, however, into the abyss, but in falling he clutched a limb of the tree, and for a moment was dangling in the air, sustaining his great weight by one hand. Quick as thought, Barstow and Pettibone flew to his rescue, but their aid was not required; the fall had broken the terrible spell that had caused the catastrophe, so well-nigh fatal, and before either of the gentlemen could reach him, he had regained his footing and walked safely over; having gathered the specimens for which he had periled his life, he walked deliberately back across the bridge as calmly as he would have crossed a parlor floor. Naturally a brave man, and ordinarily unmindful of perils from which others might shrink, his sudden and terrible alarm upon that occasion, is even to him inexplicable.



CHAPTER XII.

The Rivers of Colorado—The Great Mining Regions—Leadville—Cities and Towns of Special Interest—Resources and Productions of the State—The Great Colorado—Houses of a Buried Race—Indians.

The river systems of Colorado include the Upper Arkansas, Platte, Rio Colorado, Rio Grande, the Smoky Hill and Republican Forks of Kansas River. The South Platte rises in the north-west corner of South Park at the base of Mount Lincoln, and with its tributaries drains the eastern slopes of the mountains north of the Divide. It flows southeast through the park and receives many tributary streams. After passing through the "foot hills," it runs northerly to its confluence with the Cache a la Poudre, and thence easterly to the frontiers of Nebraska. The Arkansas rises in the eastern slopes of the Great Divide and passes through the mountain range at Canon City, thence across the plains, with a course of nearly five hundred miles in Colorado. These rivers are not navigable.

The Smoky Hill and Republican forks of the Kansas have their sources in the eastern portion of the plains and pursue an easterly course to the borders of Kansas. The region of country west of the main range and north of the Uncompahgre Mountains is drained by the tributaries of the Rio Colorado and those of the north fork of the Platte, which flow through the fertile regions of the North Park. The chief northern tributaries of the Colorado are the

Bear, White, Green and Grand Rivers. The Rio Grande rises in Southwestern Colorado, pursues an easterly course for 150 miles, and thence flows to the south through the San Luis valley.

The mountains are chiefly composed of granite rocks which contain gold and silver. West of the main range, the country is of volcanic origin, the lava rocks not yielding metals. To the rich mines of Colorado very much of the prosperity of the State is due, but great as are the mining interests, it must not be supposed that the precious metals are always found in abundance even in places where the indications are such as to seemingly warrant a large expenditure of capital and labor. The open mouths of abandoned mines, everywhere to be seen in the mountains, though voiceless, give warning, otherwise the great mines would excite a furor equal to that of the early days of California.

On the way from Denver to Central City, we pass through the marvelous Clear Creek Canon. The bed of Clear Creek has evidently been very thoroughly washed out in the search for gold. Millions of dollars have been taken therefrom by gulch mining, as Chinamen are now at work washing the soil again, using the abandoned sluices, and content with earning \$1.50 a day by their labor. These gulch-miners live in cabins by the side of the creek. An account of the mining industry of the State may interest the general reader.

Gold is found in lodes and fissure-veins, and in gulches or placers at all points within the belt of about fifty miles in width, which extends north and south through the center of the State. It is

obtained by amalgamation on copper plates and by means of the electric battery. The silver ores are divided into two classes—surface and galena deposits. The cost of recording a claim to an area of land 1,500 by 300 feet, for a mine, is \$150. Upon this land \$500 worth of labor is supposed to have been done before the claim can be recorded. More than one hundred thousand such claims have been recorded in Colorado, thus showing the enormous expenditure of sixty-five million dollars before a single dollar has been taken, and before it is certain that a single dollar ever will be taken from the earth. In a single day's ride over the country, hundreds of abandoned claims may be seen.

The silver ores of Leadville and Lake County are mostly found in the form of carbonates, containing a very large proportion of lead. The mineral strata are reached at depths of from ten to one hundred feet, but silver ore may be found at any depth. The carbonates alone are rich, and extend over an area of two hundred square miles. The richest region so far known is Leadville and vicinity. As a rule, paying earth will be found within the first hundred feet. Here an industrious miner, with or without experience, will, in almost all cases, have success. There are no silver mines known which are so easily worked, and which require less expensive machinery, nor are there any whose product is so easily reduced as that of the Leadville mines. The ore is raised in buckets by horse-power. The entire outfit, including the horse, does not exceed five hundred dollars.

In the winter of 1859, ten years after the great gold excitement of California, gold was discovered

in California Gulch, Colorado. It was found in placer-diggings, but those were soon exhausted, and the mining town of Oro—three miles from Leadville—was deserted, although it had at one time not less than ten thousand inhabitants. Until 1875, the attention of miners had been directed exclusively to gold—silver had not been discovered—but in 1877, high-grade ore in inexhaustible quantities was found in the iron mine. The early famous mines were Camp Bird, New Discovery, Little Chief, Eaton, Vulture and Little Pittsburgh.

In the Leadville district, the mines are nearly all owned by capitalists of Eastern cities, especially of Chicago. In 1878 over 10,838 tons of ore were smelted, producing over three million ounces of silver, worth \$3,230,000. The value of lead produced was over \$700,000, and this, with the gold of the placers, gave an aggregate of the mineral product of Lake County, for that year, of over four million dollars.

Sixteen miles north of Leadville is a promising district, known as Ten Mile Creek, in which sulphuret ores have been found; but hard and soft carbonates have been discovered in adjacent districts. Ten Mile Creek is a thousand feet higher than Leadville; it lies in the basin formed by spurs of the Rocky Mountains, and includes several noted gulches where placer gold has been mined in considerable quantities.

Passing along Clear Creek, we arrive at length at Black Hawk and Central City. A walk down the valley in which these placers are located, is interesting, and especially if we visit "Brigg's" mine and

descend into it to the depth of a thousand feet, where the miners are at work. The mine is exceedingly rich. Georgetown — known as "Silver City," — a place of several thousand inhabitants, is situated between the towering snow-clad peaks. Silver Dale and Silver Plume, two little mining towns, are adjacent. From Georgetown many points of interest may be reached by carriage; among these is the Argentine Pass of the Great Divide. Standing upon it, we may see streams from the same rain-shower flowing down one side of the mountain toward the Atlantic, and down the other toward the Pacific. Empire Pass is but four miles from Georgetown; but the most interesting trip of all is that to Gray's Peak — the highest mountain in Colorado, its elevation being 14,434 feet. A carriage road leads to within three miles of the summit, and a good trail leads directly to the top. The sure-footed mountain-horse and the patient donkey will carry travelers safely up. Snow lays in patches all along the way, even in midsummer. From the summit, range upon range is spread out before us; and Pike's Peak, ninety miles distant, is clearly discernible.

Georgetown is the county seat of Clear Creek County, and the centre of the great silver-producing region. It is fifty-four miles distant from Denver, and one hundred eight-four from Cheyenne, and has an elevation of 8,450 feet above the level of the sea. It is a busy and beautiful city of between four and five thousand inhabitants. The gold and silver mines of Clear Creek County have yielded fourteen million dollars. The princely sum of three millions has been taken from the "Dives Pelican." The

"Terrible," "Colorado Central," "East Roe," and "Equator," have been very productive.

The Cheyenne Canon is especially interesting. At Seven Falls the tourist may see a striking vista of the plains, bounded by the abrupt walls of the gorge. It is a scene of marvelous beauty and grandeur.

It is not easy to attain an adequate conception of the grandeur and majesty of the great red walls of the Grand Canon, seamed and furrowed from top to bottom. In places trees grow on the top and down to the very edge of the chasm.

There are many kinds of dwellings in the State, from the elegant residence of brick or stone, to the adobe-plastered, earth-roofed log cabin, the huts of hemlock or cottonwood boughs, the canvas or skin tent, or the caves of miners and stockmen.

In Bear Creek and in many other creeks, there are abundance of fine trout; indeed the small streams all over the State offer ample attractions to the sportsman and angler.

The counties of Jefferson, Clear Creek, Gilpin and Boulder are perhaps the best mining regions of the State—certainly the best known. Within a radius of forty miles from Denver are many important towns. Gilpin county, although one of the smallest counties, has furnished half the mineral product of the State. The mineral belt is about ten miles in width and extends into the neighboring counties. In the last nineteen years, the aggregate production of gold and silver of this region has been more than thirty-eight and a half millions. Among the notable mines are the "Gregory," "Bob-tail," "Grinnell,"

"Burroughs," and "Kansas." The average depth of these mines is eight hundred feet. In 1877 these mines employed 1,500 men and yielded during the year \$2,300,000, or \$1,500 for every man so employed. Of the many growing and busy towns of Colorado, the mention of several of the most important must suffice.

Idaho Springs in Clear Creek County, sixteen miles east of Georgetown, is an interesting place, not more from its hot and cold mineral springs, than for its position in the mining regions.

Greeley is a pretty little city on the Cache a la Poudre river, named for one of its founders and patrons, Hon. Horace Greeley. It was first settled in the spring of 1870, by a colony from New-York, who purchased 12,000 acres of land and laid out a town. Canon City occupies the gateway of the Southern mountains, and is beautifully situated on the Arkansas river. It has communication with Leadville by stage lines. Golden City, sixteen miles from Denver, was settled in 1859—the days of placer-mining. It has a population of about four thousand, and is notable for its manufacturers. Central City, the capital of Gilpin County, is a mining place of considerable note. It is four miles from Black Hawk and has an elevation of 8,200 feet. Del Norte, Lake City, Kit Carson and Rosita, are busy places.

Leadville, 145 miles southwest from Denver and 160 northwest from Pueblo, is a city of very great importance for its rich silver mines. It occupies a picturesque position in a basin of the mountains, formed by the Continental Divide, and the

Mosquito range, at the head of the Arkansas River. It has the greatest elevation of any city in the United States, being ten thousand feet above sea level. We made the trip by stage from Webster City, passing through a most picturesque and wild region of country. The road for the distance of forty miles runs through the lovely valley of the Platte, through the great South Park, and past the famous Butte. All the stage routes to Leadville are exceedingly picturesque. The road from Canon City hither, passes through grand canons and along rocky and precipitous acclivities as it winds up the mountain side. Every moment of the toilsome ascent opens new scenes that are grandly beautiful, and the traveler forgets his fatigue in the interest and pleasure afforded by the view of such wonderful scenery.

Arriving at length in Leadville, we find a city of perhaps fifteen thousand population, located in the centre of a great mining region. Fully two-thirds of the adult population are men; women are scarce and no doubt command a heavy premium. The city is built of wood. The fifty-seven principal mines in the vicinity yield almost a million dollars a month.

"The 'Highland Chief,' a gold mine," says Professor Newberry, "is one of the most extraordinary, simply from the magnitude of the deposit. The structure is similar to that of the 'Colorado Prince.' As to the workings, there is a shaft of 88 feet, cutting through the porphyry, and striking the ore body. From this to a depth of 162 feet, there is no bottom to the ore. No one knows at present the extent of this fissure, but it seems not improbable that it will

be one of the great gold-fields of the world. It is certainly, in my opinion, one of the most promising gold-fields that has been discovered on this continent. No portion is taken out that will not pay for working it. While I was there, thirty tons gave a return of \$50.95 per ton. I do not know of any gold mine in the world, with a width of sixty or eighty feet, that will average \$50 to the ton. The California mines, from ten or twelve to fifteen feet in width, return about \$15 to the ton; in the Black Hills, in gold mines which are really paying, a width of 150 to 175 feet carries \$8, \$9, and \$11 a ton."

Pueblo is on the Arkansas, near its confluence with the Fountain River, and has an elevation of 6,300 feet. It is the key to the San Juan country, and although it now contains but four thousand inhabitants, is the chief city of Southern Colorado. It supplies the mineral regions in the western part of the State. It is situated on a broad and level plateau; the climate is delghiful, and the adjoining country remarkably fertile and productive. Ten miles distant from the city are the Boiling Springs, to which invalids resort in great numbers every season.

Boulder City, 5,536 feet above sea level, is noted for its mining and agricultural industries. It has a population of about three thousand, and is the seat of the State University, and also of the Agricultural and Mechanical College of the State. The county raises farm produce annually to the value of two millions, while its mines afford three-quarters, and its manufactures half a million dollars. In the

vicinity, gold and silver are found in large quantities. Among the richest of the mines are the "American," "John Jay," thirteen miles distant, "Melvina," nine miles, and "Ni Wot," twenty-five miles away—all gold mines; the "Caribou," "No Name" and "Sherman" are most productive silver mines.

The San Juan region covers an immense area of mountain country in the richest silver-mining district of Southwestern Colorado, embracing the counties of La Platta, San Juan, Hinsdale and Ouray, with portions of Conejos, Rio Grande and Saguache Counties. In this country, almost unknown in 1876, over the thousand silver mines have been discovered and located. It is said to resemble the mines of Potosi, in South America, which have yielded more than a thousand million dollars in silver.

The mines of San Juan County have yielded largely; miners are coming in rapidly, and new towns are constantly springing up. In this region both silver and gold are found in abundance. The principal fields of operation are on the San Juan River and its tributaries, and the affluents of Grand River, on the western slope, and the head waters of the Rio Grande on the eastern.

In the Eureka district, the Uncompahgre, Iron Springs, Mineral City, and Los Animas regions there are many rich mines.

The agricultural resources of the State have been but partially developed, and yet the wheat crop of 1877 was 1,700,000 bushels; corn, 250,000; oats and potatoes nearly as much, and hay, 87,500 tons. Val-

uable coal beds have been found in various places in the State.

Freighting business by teams in the mountains is immense. Six or eight mules, or a dozen oxen attached to a wagon, are employed to haul freight through the wilderness, and it is not strange that freight on heavy machinery often exceeds the prime cost of it; and that hay has been sold for \$140 a ton.

As a grazing country, Colorado is unsurpassed. In 1877 the shipments of cattle from the State were seventy-five thousand head, valued at two and a half million dollars.

Herd of cattle belonging to different owners, stray from ranch to ranch, and were it not for distinctive marks they bear, it would be difficult or impossible for the several owners to designate their property, but by a system of management common to the ranchmen, the business of collecting and separating the stock is rendered very simple. During the months of summer and early autumn this work is performed. A director of the count, or "round up," is chosen, and his orders are obeyed by the force—forty or fifty men, provided by the ranchmen according to their respective interests. These men have two or three horses apiece, and are accompanied by assistants. Starting from a given point, taking a regular course, and camping at night wherever they may happen to be, they traverse the grazing regions in quest of the cattle. Each day the horsemen scour the country, and, with the expertness acquired by practice, they collect the animals together, sometimes upon the plains and some-

times in a "corral," or large enclosure. The work is sometimes exciting to both riders and horses, and is always attended with danger. Occasionally a steer will attempt to escape, but is quickly brought back by the skillful horseman; instances have occurred, however, in which the horse has been killed and the rider seriously wounded by an infuriated animal. Where their work can be done in corrals it is comparatively easy, but often it has to be done out on the open plain, and then it is more laborious and fatiguing. In isolated localities, cattle are sometimes very wild, and will often attack a horse and its rider. With a well-trained horse, however, a vacquero can always hold his ground against the enemy. The owners of the cattle always make it a point to be on hand when rodearing is to be done. They have a keen eye for their own stock if they have once given the animal a scrutinizing gaze, and brand or no brand, are generally able to identify. The branding, which is done with a hot iron, and the clipping, are usually the work of an instant, but it is an age of torture to the animals, which make the vicinity hideous with their bellowing while the work is going on. After this there is no further trouble for them until they get into the hands of the butcher.

All the varieties of vegetables raised in temperate climates, grow here in abundance and of superior size and quality. The culture of the grape is likely to become a specialty.

Colorado has now thirty organized counties, and forty-two banks, with a capital of two and a half million dollars; is free from debt, and, in all re-

spects, is one of the most wealthy and prosperous States in the Union.

Within the State there are 3,734 Indians, retaining their tribal relations—all Utes, and established at agencies of Los Pinos, Southern Utes, and White River. Their reservations cover twelve million acres of land.

Major Powell, in describing the topography of the State, says: "The lower third of Colorado lies but little above the level of the sea, while the upper two-thirds has an elevation of from four to eight thousand feet. Out of this basin or plateau rise snow-clad mountains to an altitude of from ten to fourteen thousand feet. Hardly any rain falls upon this upper basin of mountains, but in winter, immense drifts of snow cover these eternal rocks. When in summer, this snow commences to melt, ten thousand cascades and little streams are formed. They plunge down the rocky mountain sides, cut their courses through the immense plateaus, and gradually run as swift rivers through the silent region. They cut deep channels through the rocks, so that the beds of these rivers are from five hundred to seven thousand feet below the general surface of the plateaus.

"For two hundred miles the Green and Grand Rivers run in a channel cut to the depth of a mile. The whole upper two-thirds of Colorado is cut up by gorges and canons, so that the country is almost impassable. There are no evidences that these canons are formed by upheavals of huge masses of rocks, but they are all caused by the slow but perpetual action of the mountain streams. If one hundred and fifty

mountains like Mt. Washington were plucked up by the root, they would not fill the Grand Canon of the Colorado River. The fall of this river is very great, and differs from twenty-five to two hundred feet per mile; it is, therefore, not navigable. Moreover, for one thousand miles along the Colorado River there is no place where a town or farm could be located, for the river is entirely unapproachable for that whole distance.

"These canons have carried away vast areas of sediment. The whole region has become one of naked rocks. Geological studies can here be made with certainty; every stratum can be measured. Nature lies before us like an open book. The amount of material carried away by this river is as large as a rock six hundred feet in depth, covering the States of New York, Pennsylvania, Ohio and Indiana, or as large as California and Nevada. This vast amount of rock, the storms of ages have hurled off.

"The rivers of Colorado are older than the valleys and mountains. Gradually as the mountains rose, the rivers cut their way through them. The stratification of these rocks is never sweeping, but always vertically broken, rising or falling abruptly from one hundred to twenty thousand feet. These strata are always horizontal, and sometimes there are found zones of rocks twenty miles in width broken into irregular fragments.

"The Colorado river carries about as much water as the Ohio at Louisville. Where the rock is soft, it forms a broad river, but where it passes through basalt, its channel is narrowed down to sixty or

seventy feet, and through it this vast volume of water plunges and rushes in a mad, wild and irresistible stream that would carry anything before it. Sometimes when a storm rises and heavy showers fall, this mile-deep channel of the river is filled in an incredibly short time to a height of hundreds of feet, and the torrent sweeps through it at a most terrific rate. There are however no vertical falls of any magnitude in the Colorado."

Most interesting to the explorer are the thousands of ancient ruins found throughout the whole region. These habitations are built of stone and often reach a height of several stories. At the heads of the streams forming the Colorado, are the most ancient of these ruins; while further down in the deep cliffs and canons they evidently belong to a later period.

It seems that the people were driven from the beautiful valleys above to seek protection on these high cliffs, which were better adapted for defense.

Did the people who built these habitations belong to the race of Mound Builders whose wonderful works are to be found in Ohio and other regions east of the Mississippi? There are no records or memorials of any sort to furnish data for an opinion. Of the race and of the great catastrophe that swept them from the face of the earth, all is conjecture. It is evident however from similarity in the construction of these houses to those of Arizona and old Mexico that all were erected by the same race of people.

CHAPTER XIII.

Climate of Colorado—Colorado Springs—The Chiann Mountain—The Ute Pass—The Elevation of the Country at Points along the Route.

Invalids from all parts of the world visit Colorado, and very many of them make it their permanent residence. How grateful and invigorating to persons in the best of health is the lowering of the window and admission of the fresh air, in place of the oppressive atmosphere of the room long closed and sealed against healthful ventilation! So is it, but in a vastly greater degree, to the wan and weary victims of disease and medication, to step, as it were, from the confines of impurity, out upon the broad expanse of purity, to inhale no longer the noisome air of crowded cities and marshy lowlands, but instead, the pure life-giving air from the mountains of Colorado. Here Nature's remedies are life's keenest enjoyments; here, upon the summits of the eternal hills, with scenery on whichsoever side we turn, of such sublimity and grandeur that the heart swells in silent homage to Him so near, that but to extend the hand is to reach the gates to the Eternal City. While to the sight there unfolds a panorama of indescribable beauty and awful sublimity that moves the soul to its innermost depths, the physical being is awakened to new life and vigor.

To consumptives, both in fact and in tendency, Colorado has become a Mecca, without equal on the continent for salutary climatic influences, and



while it is true that very many have found death, when they had confidently hoped for new life, it is seldom that a timely and sufficiently protracted visit is not attended with signal benefit, if not indeed entire restoration of health. The climate in all parts of Colorado

is proverbial for its mildness. It is similar to that of Mexico, which is a continuation of the same plateau; but there are portions of the State more highly favored than others.

Colorado may be climatically divided into three great sections—Northern Colorado, the main town of which is Denver; Southern Colorado, the chief points of which are Colorado Springs, Pueblo and Canon City; and the Mountain region, the principal towns of which are Georgetown, Idaho, Fairplay and Central City.

Colorado Springs, the county seat of El Paso county, may be regarded as the climatic centre of the State. This town, a favorite resort of invalids and of tourists, is on the line of the Denver and Rio Grande railway, seventy-six miles south from Denver, and has an elevation of 5,975 feet above sea level. Its latitude is 38 degrees 50 minutes, the same as Washington City. It takes its name from numerous medicinal springs in the neighborhood, the most important of which are grouped together, about five miles to the west, among the foot hills at the base of Pike's Peak, in a beautiful glen to which has been given the name of Manitou. It is the "Saratoga of the West." These are the celebrated "Boiling Springs," which years ago were made known to the world by Col. Fremont, Ruxton and other explorers. The native Indian tribes were aware of their healing properties, and regarded them as supernatural phenomena. The waters hold in solution sulphur, soda and iron. Thousands of invalids visit them annually, and many have established their dwellings about them. The average

temperature of the region about Colorado Springs is about sixty degrees. The thermometer rarely indicates below zero, and seldom exceeds eighty degrees at the warmest. Hot, sultry days, or damp chilly nights are here unknown. Snow seldom remains on the ground longer than twenty-four hours. The winters are usually very mild and the absence of clouds the year round is indeed remarkable. The clear sky and warm genial sunshine are seldom hidden. The atmosphere is never burdened with malarial and poisonous exhalations, but on the contrary, is highly charged with electricity, is entirely free from humidity and is wonderfully exhilarating.

The decomposition of animal matter takes place so slowly that the noxious gases engendered pass away imperceptibly.

There is no such thing known in Colorado as "damp night air." Although the air is cool, it is perfectly dry, and a person may sleep with windows and doors of his dwelling wide open, summer and winter, without the risk of "taking cold." There are hardly a score of days, in any year, in which invalids may not sit out of doors, ride or walk, forenoon or afternoon, with comfort and pleasure.

The nights of midsummer are invariably cool; indeed, there are not half-a-dozen nights in a season when blankets are in any degree uncomfortable. The early autumnal storms, so much dreaded in the East, never come here. The autumn is the gala season of Nature, during which comes a long procession of lovely days, fresh but balmy, brilliant but never oppressive.

The bed of the Fountain River, at Colorado Springs, is over a lineal mile higher than Philadelphia. Here one must breathe more fully and more rapidly than on ordinary levels, and the result is a permanent increase of the breathing capacity. For most "ills which flesh is heir to," the increased activity imposed on the respiratory organs by residence in high altitudes, is a direct and constant benefit.

The mean annual temperature of this region is fifty degrees. For the five years from 1872 to 1877, the mean temperature in winter was thirty degrees; spring, forty-six; summer, seventy; and fall, fifty degrees. Between July, 1872, and the close of 1877, there were only sixteen days on which the sun was entirely obscured by clouds; and the average number of cloudy days in a year was but sixty-five; in the two years, 1872-3, there were but ninety-seven cloudy days. The annual rain-fall for the five years was fifteen inches—in winter, one-and-a-half; spring, six-and-a-half; summer, four-and-a-half; and fall, two-and-a-half inches. The average snow-fall was twenty-two inches. The annual death-rate of Denver, the largest city in the State, and embraced in the northern climatic division, is only ten to every thousand inhabitants—a lesser rate of mortality than that of any other city in the Union. New York has thirty-two, and New Orleans has fifty-four to every thousand.

There are two facts arising from the altitude of this region, which, in a great degree, qualify the temperature of the climate, but the influence of which is scarcely manifested by the thermometer.

In the first place, there is a more marked difference between the period from sunrise to sunset, and the period from sunset to sunrise, than there is on ordinary levels. A change of temperature is perceptible at the moment of sunset, and hence, a person forming his idea of cold merely from the thermometrical readings, would conclude that the winter is much colder than it really is. The other fact is, that when the sun shines, there is a more marked difference between the sunshine and shade than there ordinarily is elsewhere. The sun pierces through the air in the fullness of his power, but has comparatively little effect on the atmosphere,—dry air being a poor conductor.

Northern Colorado, as to temperature, is similar to eastern Pennsylvania, Denver being in the same latitude as Philadelphia.

Colorado Springs has attractions for the tourist as well as for the invalid. It is a pretty little city of about three thousand inhabitants, about sixteen miles distant from Pike's Peak, whose snow-clad summit pierces the skies; four miles from beautiful Glen Eyrie, and from the famous "Garden of the Gods;" all of which picturesque and interesting localities are accessible by good roads. The surroundings of Colorado Springs are marvelously beautiful. At a distance of six miles to the south of the city, is the great Chiann Mountain, one of the grandest, most picturesque, and beautiful mountains in the world. Separating this from the main range, is the wild and wonderful Chiann Canon,—the second of the continent for magnitude and sublimity. Eight or nine miles away, in a series of

beautiful valleys, is the "Enchanted, or Monument Park," whose wonderful features of strange conglomerate rocks have been mentioned. Near the South Park, through the Ute Pass—over which there is a good road—the traveler arrives at the Petrified Forest. Here are thousands of Petrified Trees, and other wonderful formations.

The Ute Pass is a most romantic and picturesque gorge, through which Fontaine Creek flows. Here are the Ute Falls—a beautiful cascade, pouring its crystal waters over a precipice more than fifty feet in height.

Southern Colorado is separated from Northern Colorado by the Great Divide, a high mountain range, which, beginning at the main range, about thirty miles south of Denver, extends almost due east. This climatic division has a southern exposure under this great wall, with the general climate of Norfolk, Virginia, except that it is dry.

In the mountain regions, any degree of cold, up to perpetual snow, may be attained by going high enough.

Persons in advanced stages of consumption should not venture into the rare atmosphere of greatly elevated plains, because of the necessity for increased action of the respiratory organs, which tends to hasten, rather than to retard, a fatal termination; and the same rule is applicable to any form of organic disease of the heart.

Once at Kansas City, which is 653 feet above sea level, the pilgrim to the Eldorado of health is fairly in sight of "the promised land." He can leave Kansas City at noon one day, to sleep the next



night at mountain base or peak, or he may make a gradual ascent, stopping over at will at the many interesting points along the route. At Topeka, the elevation is 878 feet. Pushing onward, through the "Italy of America," as enthusiastic writers have termed the great southern belt of Kansas, the lovely valley of the Arkansas is soon entered, and at Carbondale—so-called from the vast coal regions in the vicinity—the traveler has reached an elevation of 1,089 feet. The gentle undulations of valley show a very slight fall at Burlingame. From thence to Osage City, the rise is scarcely perceptible, being on a level with Carbondale. There is a slight decline at Reading, but at Emporia the elevation is 1,169 feet; at Cottonwood, 1,192; Florence, 1,287; Peabody, 1,367; Newton, 1,445. Again, and for the last time during the entire distance, there is a slight fall at Halstead. The ascent is now steady and rapid, Burton noting 1,427; Hutchinson, 1,500; Sterling, 1,613; Raymond, 1,699; Elmwood, 1,759; Great Bend, 1,876; Lawrence, 2,035; Kinsley, 2,224; Dodge City, 2,516; Lakin, 3,037; Sargent, 3,425; and the line of the two States is crossed—Kansas to the rear, and Colorado to the front. Upward and onward is the way; Granada being 3,485; Los Animas, 3,976; La Junta, 4,134; Rocky Ford, 4,246; Apishapa, 4,326; Nepesta, 4,495, and finally, the terminus of the road at Pueblo, 4,764—the mountains standing guard on all sides with the entrance to the "Garden of the Gods," directly in front, presenting features of unparelled grandeur.

Manitou with its wonderful mineral springs; Denver with its mountain shadows; Idaho with its

baths, hot from the mountains; South, Middle and North Parks with their springs and wild and picturesque beauty; Long and Gray's Peaks rivaling each other in their sublimity and altitude; Pike's Peak, over 14,000 feet above sea level, and on thus through the mighty range, one and all are Nature's grand laboratories where health, vigor and happiness are dealt out in magnificent profusion.



CHAPTER XIV.

A Trip to Utah—Among the Mormons—Salt Lake City—"The Dead Sea"—Mining Interests—The Early Settlements—Scenery of the Country.

So rapid and yet so delightful had been our tour throughout the State of Colorado, and so nearly had the period to which we had limited ourselves expired, that but a few days remained for our proposed visit to Utah, and we were therefore obliged to content ourselves with seeing Salt Lake City and a few other points especially notable and interesting.

We arrived by railway at Ogden—thirty-six miles north of Salt Lake City—the junction of the Union and Central Pacific Railroads, which pass through the northwestern part of the Territory. Ogden is a pretty little town of four or five thousand inhabitants, distant 882 miles from San Francisco, California. Here are half-dozen churches, as many schools, and two good news journals.

As we left Ogden on the Utah Central Railroad which runs from Ogden to Salt Lake City, we crossed Weber River on a substantial iron bridge. Just beyond, we reached a high piece of ground like a prairie, only that it is covered with sage brush, and soon descried in the distance the great Salt Lake, its blue waters extending east and west, with lofty mountains forming a magnificent back ground. Now the sage brush grows thicker, and small game is abundant.

South of the cragged extremities of two mountain ranges, is the entrance to the Great Salt Lake valley. Here we saw fields waving with golden grain, orchards pendant with delicious fruitage. Soon the Great Salt Lake was in full view. This beautiful lake, with its placid waters shimmering in the sunlight like a sea of burnished gold, reflecting the deep-blue dome above, and the grand old mountains which cast their sombre shadows over



THE UTE PASS.

s silent bosom, and then stretching away to the stant southwest, until it seems to kiss the over-
anging sky, is an object of the rarest grandeur and
erest. This beautiful lake is fed chiefly by five
untain streamlets, and owing to the presence of
ne matter it never freezes.

The Great Salt Lake, or "Dead Sea," is the rem-
t of a vast inland ocean, with the ancient water-

marks still distinctly visible along the base of the mountains, where the erosion has made a well-defined line of shore. The margin of the lake is covered in some places so plentifully with salt that it may be shoveled up like sand. The only forms of life found in the lake are the crustacea and a marine insect. The atmosphere is a bluish haze, and the scenery in the vicinity is very beautiful. The lake is eighty miles in length, fifty in breadth, and its elevation above sea level is 4,200 feet. Its commercial value is incalculable, as salt can be procured from its waters at a merely nominal cost, sufficient, not only for the wants of the interior States and Territories, but for the wants of the entire country. Various analyses of the water have been made, all showing that it contains common salt, lime carbonate, lime sulphate, epsom salt, magnesium chloride, and iron.

Salt Lake City, the capital and metropolis of Utah—"Zion," of the Mormons—is built on the banks of the river Jordan. The cleanliness of the place and general thrift and prosperity of the people, is remarked by all tourists. The site of the city is singularly picturesque and beautiful. It is at the foot of a spur of the Wasatch Mountains, and has an elevation of 4,261 feet above the level of the sea. Its latitude is 40 degrees 46 minutes north; its longitude 112 degrees 6 minutes west. The city was founded by the late President Brigham Young, in 1847. It is regularly laid out in blocks of ten acres each, and the streets, which, by the way, are lighted by gas, are 132 feet in width, with broad sidewalks. On either side is a clear stream of water from the

mountain canons, which, with numerous shade trees and gardens, give the city an indescribable air of coolness, comfort and repose. Street cars connect all parts of the city. The present population is nearly 25,000.

The Jordan rises in the Wasatch range of mountains, pursues a northerly course, expanding into the charming Lake Utah, and flows still further northward to the Great Salt Lake, near which the city is located—the city of which one of her fair daughters sings:

“Amid the dreary desert,
Where hideous red men roam,
Where beasts of prey were prowling,
We’ve made ourselves a home.
We have the ancient order
To us by prophets given ;
And here we have the pattern,
As things exist in heaven.”

And we will take her word for it. If she does not know, who does?

In passing through the city, which was for many years an important station on the overland route to California, our attention was first attracted to Temple Block, which consists of ten or more acres situated in the northern part of the city on the first “bench.” The benches are level plateaus extending along the base and parallel with the mountain sides, and rising one above another in regular succession. They are supposed to have been formed by the action of water, which doubtless at one time covered the whole country, half way to the mountain tops. These benches overlook the city, which is mostly built on the bottom lands of the river.

From the first bench, the view is especially de-

lightful, including the lake, spread out in all its grandeur, to the westward, with mountains bounding the horizon in every direction.

The grounds are surrounded by a wall, from eight to ten feet high, built of stone and strengthened and supported by semi-circular buttresses at equal distances. The main entrance faces south, and the gateway is surmounted by an eagle carved in stone. The public buildings are numerous and some of them remarkable. The first in order is the Tabernacle—an immense structure, the first object to which the eye of the tourist is attracted on entering the city. At a distance its bell-shaped roof looks like a large hill rising above the trees. The building is oblong in shape, having a length of 250 feet from east to west, by 150 feet in width. The roof is supported by forty-six columns of cut sandstone, which, with the spaces between, used for doors and windows, constitute the wall. From these pillars or wall, the roof springs in one unbroken arch, forming the largest self-sustaining roof on the continent. The ceiling is sixty-five feet above the floor. In one end of the room is an organ which is fifty-eight feet high, thirty feet wide, and thirty-three in depth, and has 3,000 pipes. The Tabernacle is used for church purposes, as well as for other popular assemblages. It will seat 13,000 people. The building, when completed, will cost three million dollars. The Temple, now being built of granite from the Cottonwood Canon, is at the foundation, 186 feet by ninety-nine feet, the walls eight feet thick; the towers are to be 225 feet high. The southwest corner of the block contains the Assem-

bly Rooms, a magnificent structure built on the site of the old tabernacle.

Passing City Hall, the Theatre, the Tabernacle, and the residence of the late President Young, we come to the "Bee-Hive House"—a large handsome, two-storied adobe building erected at a cost of \$65,000, which is one of the finest edifices in the territory. Temple Block is in fact quite a village.

By the courtesy of Prof. Joseph L. Barfoot we visited the Salt Lake Museum, which is opposite the Tabernacle Gates, on South Temple Street. It contains almost everything that is found in Utah which is of interest to the tourist or visitor seeking reliable information respecting the minerals, ores, and natural resources of the region. The Museum is one of the best and most complete in all its departments of any west of the Mississippi—a credit alike to the city and to the curator, Prof. Barfoot, an eminent scientist to whose indefatigable labors and enterprise the excellence of the institution is chiefly due.

In this museum we saw numberless objects of the greatest interest—among which were specimens of fossils obtained in this region, views of Salt Lake City as it appeared in the olden time; home manufactures in silk and cotton, sugar, type and other things; some fine specimens of calcareous tufas, petrified moss and sage brush; silk from Young's cocoonery; portraits of Young, Kimball, Smith and other Mormon celebrities; the last spike and tie of the U. C. railway, with the hammer used at the ceremony of opening the first railway into Salt Lake City, which was performed by Young, January

10, 1870; a variety of silver and gold bearing ores of Utah—the several mining districts, of which there are many, being represented; the silver reef ores; silver bearing sand stones, which are curious and new to science; silver ores from the Horn silver mine and the Ontario or Park district; the first bullion made from the ores of Utah; the various life forms of Great Salt Lake—algæ and crustacea; the gold and silver coins of Utah; a fine collection of Utah birds—the sage hen, prairie chicken, mud hen, orioles, wax wings, etc.; relics from Kirtland, Nauvoo and Carthage; ancient and modern curiosities of the aborigines—chief's robes, weapons, scalps, tomahawk, pipe of peace, pottery, stone axes, meal stones, crania and relics from mounds; living specimens of birds and reptiles of Utah; Kit Carson's boat, etc.

Many ill-natured things have been written of Salt Lake City and of Utah, by tourists who have observed with prejudice and written without justice; and as the public abroad have turned to such writings for information and truth, so have they been too often misinformed—where they have sought for truth they have found falsehood and error. A large proportion of the population of Salt Lake City are as cultured and as good citizens as people of Boston or New York. There are thousands of people here who are not Mormons either in practice or in creed. Christian churches of the several denominations are prosperous and prospering. The Methodists have a fine church edifice which cost some \$10,000, and other fine churches adorn the city. The news journals are first-class, the many schools

are of fine order, and the people as enterprising, industrious and courteous as those of any city outside of the Territory.

Utah embraces an area of 84,476 square miles and has not less than 130,000 inhabitants, exclusive of Indian tribes. The territory is diversified by mountains, valleys and plains. The eastern third of this vast region is drained by the Colorado and its tributaries, Green, San Juan and Grand Rivers and many smaller streams. The principal towns and settlements of Utah are in the fertile valleys of the northern and central portions—in the great pathway leading from the Atlantic to the Pacific, and in the rich mining regions.

By the treaty of the government with Mexico, in 1848, the region of country now embraced in the territory of Utah, passed to the jurisdiction of the United States and on the 9th September, 1850, a Territorial form of government was established. The Mormons who had sojourned at Nauvoo, Carthage and Council Bluffs, arrived in the Salt Lake Valley in July, 1847, while yet the country belonged to Mexico. In 1849 the Mormons met in convention and formed a constitution ordaining and establishing "a free and independent government," and Brigham Young was elected President.

Till the settlement by the Mormons, the region was a part of the "Great Basin" of California, mountainous, barren and exclusively occupied by Indian tribes.

The Wasatch range of mountains running north and south, divides the territory into nearly equal parts, which are broken up here and there by other

mountains. The rivers in the eastern part, generally flow through deep canons and cannot be utilized for irrigation; the western streams can be so used and with the grandest results. Numerous lakes, of which Salt Lake is the largest, are found in various parts of the west, some being salt, some fresh, some very beautiful, but none with visible outlets. The sides of the higher ranges of mountains are clothed with timber, pine and fir, with some quaking ash, cedar, spruce, etc.

"Imagine," says Wolfe's Gazetteer, "an alkali desert with here and there a patch of sage brush; its lakes salt or brackish, with a few exceptions; its principal rivers flowing through deep cut banks, so dry that herbage perished from their very edges, yielding nothing for the sustenance of animal or man, nor a cent to the wealth of the world, and you have a picture of what Utah was. What it is to-day as the home of 125,000 of the Anglo-Saxon race, a land of fruits and grain, traversed by railroads, enlightened by schools and newspapers and churches, and enriched by industries, is the result of a defiance of natural difficulties, an endurance of privation, an energy of purpose and a sublime faith in human ingenuity and power without a parallel in the history of the world."

By irrigation, the desert became more fruitful than the lands of the Eastern States. In 1875 there were under cultivation 347,750 acres of land, the product of which was nearly three millions bushels of wheat and immense quantities of other cereals, of the total value of seven-and-a-quarter millions of dollars. Some tracts of land apparently fine, rich

soil of superior quality fail to produce crops, owing to the superabundance of alkali and other mineral substances, which encrust the surface of the earth. The agriculture of the country is carried on at a heavy expense incurred by irrigation, the land having generally to be watered several times to produce wheat and barley, and oftener for corn and roots. Thus far 277 canals have been constructed at a cost of nearly two millions dollars. Exploration by the settlers led to discoveries of coal, iron, silver, gold, copper and lead, all in great abundance which from 1868 to the close of 1875 yielded a total value of more than twenty-two and a half million of dollars; some of these mines are very rich; there are some copper mines yielding 75 per cent. of pure ore. The "Emma" mine, concerning which there has been so much litigation, is in the mountains of Utah. A silver region has recently been discovered in the vicinity of St. George, where silver is found under and in sandstone. In all probability all the mountain ranges of Utah will be found to bear deposits of valuable minerals and precious metals.

Mining in Utah first began in 1869, and at this time (1877), there are eighty-seven mining districts, where miners are at work. It would be impossible in a limited notice like this, to particularize all that is important in relation to the mining districts of Utah, or even to name the more important mines; it may however be remarked that every dollar taken from the mines represents a dollar's value in labor.

On the completion of the Union Pacific Railroad, the Mormons connected Salt Lake City with the great artery of commerce and also with the prin-

cial mining regions. There are nine railroads in operation to-day in Utah.

The importance of the commercial interests of Utah appears by the fact that the value of imports into the territory, chiefly merchandise and manufactured articles, reaches *ten millions* dollars per annum, and of the exports—mineral and agricultural products,—seven millions per annum.



CHAPTER XV.

Up the Missouri—Leavenworth—Other Points upon the River—Scenery—The Stock Business of the Plains—Remarkable Lakes—Struck a Snag—A Buffalo Hunt—Lost on the Prairie—Manners and Customs of the Indians.

Upon our arrival at Leavenworth, we found that our party from the plains had also arrived and brought with them an abundance of game and many trophies of their skill in the way of specimens for Mr. Warrington, and also a beautiful young fawn, which had already become quite tame.

At Leavenworth, we were joined by two gentlemen of that city, Messrs. Lawrence and Forristall, who had business at one of the forts of the Upper Missouri, with ample leisure for making the trip, and who formed an agreeable accession to our numbers.

Leavenworth is the chief city of Kansas. It is beautifully located upon a gentle eminence rising from the water's edge, and commands a view of the river for many miles. At this point, the river is three quarters of a mile in width, and during a freshet its current is exceedingly rapid. The first house built in Leavenworth was erected in 1854; its present population is about 25,000.

Fort Leavenworth is situated three miles above the city, on the government reserve. The many government buildings located here give the place the appearance of quite a village. Very many government trains were formerly here fitted out for the "Far West," but the supplies are now carried by railroad to points hundreds of miles nearer their destination.



Weston, Platte County, Mo., is four miles above the Fort. It was settled in 1838, and was formerly an important rival of Leavenworth City and St. Joseph, Mo.; but westward was the course of empire, and Weston was soon left with her hands in her pockets, with plenty of leisure. The population is about 1,700—not more than half its number twenty years ago. It is situated in a rich agricultural country, but other cities offer better markets, and its trade is unimportant.

Forty miles above Weston, on the right bank of the river, is Atchison, Kansas. It is a lively, prosperous place, and rivals Leavenworth City in commercial importance. Its population does not exceed 12,000.

Still winding around numerous curves, and with some difficulty avoiding sand-bars and snags, we pursue our course and next arrive at St. Joseph, Buchanan county, Mo. The main portion of the city is built on "the bottoms," but many elegant residences have been erected upon the bluff that extends to the river just above the older portion of the city. The Hannibal & St. Joseph Railroad gives it communication with the East, and other railroads to other important points. St. Joseph is distant from St. Louis 570 miles by water and 305 miles by railroad. The manufactures of the city are varied and extensive, and in population and business activity, it is unsurpassed by any other point on the river except Kansas City. Its population is about 28,000.

The higher we ascend the Missouri, the more picturesque and varied is the scenery. The wide.

bottoms above St. Joseph are covered with a tall, rank growth of prairie grass, that sinks and swells in the passing breeze; rocky cliffs rise from the water's edge and tower aloft to the height of three or four hundred feet; the river expands to grander proportions and often exceeds two miles in width.

Nebraska City, the next important landing, is located on the west bank of the river in Otoe county, Nebraska, twenty-eight miles below the mouth of the Platte river. With the exception of Omaha, it is the largest and most important city in the state. Hundreds of expeditions have started from this point, on their journey across the plains. It is a flourishing city of about ten thousand inhabitants.

Platte River unites with the Missouri thirty miles above Nebraska City. It is about one-third of a mile in width, but is too shallow for navigation. It is about one thousand miles in length; and thousands of emigrant and government trains that have crossed the plains have encamped upon its banks. Its course is from the west. One of its affluents—the Sweet Water—flows from a gateway of the Rocky Mountains, known as the South Pass. The North Fork of Platte River, rises in the Rocky Mountains of Colorado, west of Long's Peak, and flows a northerly course till it passes near a deep cleft in the mountains, known as Devil's Gap, then around Laramie's Peak and pursues an easterly course to the Missouri. The South Fork rises in the vicinity of Pike's Peak and flows a northeasterly course till it reaches and unites with the North Fork, 150 miles west of the Missouri.

The State of Nebraska comprises an area of 75,-

995 square miles—larger than the whole of New England. There are no mountains in the State. The whole surface consists of rolling prairies, vast table and rich bottom lands in the valleys of the numerous streams. Nebraska is one of the great corn-growing and stock-raising States. The climate is delightful, and the soil—especially in the eastern part of the State—is excellent. Its wheat crop rivals that of California.

Nebraska was a part of the territory purchased from the French in 1803. It was admitted into the Union as a State in 1867. Its capital is Lincoln.

A brief description of the stock business of the plains will doubtless interest many readers. It should be understood that the grazing regions of the plains extend from Kearney, near the ninety-ninth meridian, to the Rocky Mountains, and embraces Southwestern Dakota, Southeastern Wyoming, western Nebraska and part of Colorado and Kansas. Through this vast region, cattle and sheep range, summer and winter, feeding on the rich prairie grass and requiring no attention except branding and driving to market, when in sufficiently good condition.

The whole country is occupied by ranches, thirty or forty miles apart. Ranches, as the reader may be aware, are the houses—mostly made of sod—where the herders eat and sleep. Government owns the land, except that the stock owners generally claim from 40 to 160 acres on the water-courses, where their ranches are situated, and this ownership of the ranch settles the title to the range, as the State law forbids any other party to allow cattle to

remain more than three days on a range already occupied. A ranch is generally the abode of from two to five men, and these can care for from five hundred to two thousand cattle or sheep. Men owning over two thousand cattle—and there are many who have twelve thousand, and some *forty* thousand—generally have contiguous ranches, about twelve miles apart.

The whole cost of keeping cattle a year, and marketing them, varies from two dollars and seventy-five cents per head for small herds—less than one thousand—to one dollar per head, for large herds. Three hundred two-year-old heifers will keep a family in moderate comfort, after the second year, and make the owner rich in ten years. The supply of cattle is kept up by natural increase and by the importation of stock from Texas, which are driven in herds of many thousands to Ogalalia, a small station on the Union Pacific railroad, some forty miles west of North Platte, and sold to stock growers all over the grazing region.

From June 10th till the latter part of July, these Texas cattle arrive at Ogalalia in such vast numbers that it is, beyond doubt, the greatest cattle market in the world. No choice is allowed the buyer, except as to age and sex—a thousand is a thousand—and the buyer takes his number, drives them to his range, brands them and then turns them loose.

Omaha is the next city of importance upon our route. It is 820 miles above St. Louis on the west bank of the river. Its location is peculiarly favorable in all respects. It is midway between the great oceans, in the midst of an extensive and

exceedingly rich agricultural region and contiguous to rich mining districts; having uninterrupted intercourse by water with so many of the principal cities of the Union, and being also the chief central point and Eastern terminus of the great Union Pacific Road, the future of Omaha is full of grand probabilities. Already the capitalist has seen golden opportunities here, and numerous manufactories have been established that give employment to thousands of industrious hands. Omaha is pushing forward with an energy commensurate with her brilliant prospects. She is building depots, warehouses, elevators and bridges to facilitate dispatch in her great industries. The city is located on the "second bottom" or plateau, fifty feet above the Missouri level; the public buildings are many and elegant, and in all her appointments and surroundings, Omaha gives unmistakable evidences of becoming a great city. The present population is perhaps 25,000. It was named from the Omaha tribe of Indians. Opposite Omaha, in Pottawatomie County, Iowa, three miles from the river, is Council Bluffs, a flourishing little city of 15,000 inhabitants. It derives its name from the memorable council held here in 1834, between Lewis and Clark and the Indians. The Mormons settled here in 1846, and after remaining about three years, went forward on their journey to the holy land. The city has passed through many vicissitudes of fortune, and, like many other western cities, is laid out on a magnificent scale. It has an air of permanent prosperity. The country in the vicinity is fertile and populous, and the city is attaining importance as a railroad

centre. Its population is about fifteen thousand. We landed at Sioux City, which is situated on the left bank of the river just below the mouth of Big Sioux river, 900 miles above St. Louis. Its proximity to the frontier renders it an important trading post. The Big Sioux river unites with the Missouri just above the city. It is a narrow stream—not over 125 yards wide—but is 350 miles in length. It rises in the Eastern part of Dakota, near the source of the Minnesota river, which flows into the Mississippi.

The lakes around the source of the Big Sioux are numerous, picturesque and beautiful. They vary in length from one to ten miles, and in depth from four to fifteen feet. They are perfectly clear and the trout and salmon they contain may be distinctly seen among the boulders at the bottom. The banks of some of these lakes are very low, of others they rise in towering cliffs a hundred feet from the water. Numerous bands of Indians roam at will throughout this picturesque region, and wild game of various kinds is plentiful.

Embarking again, we pursued our way up the rapid stream and soon passed the mouth of Dakota River, which flows in from the north. This stream is about 600 miles in length and one hundred yards in width at its mouth; near which Yankton the Capital of Dakota is situated.

The Niobrara river unites with the Missouri, a thousand miles above St. Louis. It rises in the foot hills about fifty miles north of Laramie Peak, and flows in an easterly course but a few miles distant from the northern boundary of Nebraska

and southern boundary of Dakota. It is about 700 miles long and 200 yards in width. Just below the mouth of the Niobrara, our boat struck a snag, which caused considerable damage, and we were obliged to "lay up" for several days, for repairs. An opportunity was thus given for a grand hunt, which we gladly improved. Immense herds of buffaloes roam over the vast prairies on both sides of the river. Indeed the country between the Niobrara and the Elkhorn may be called the "Hunter's Paradise." It has ever been a favorite region with the Indians.

Transferring our ponies and camp equipage from the boat to the shore, our entire party, after filling our saddle-pockets with ammunition and provisions, started in a westerly direction, pursuing our course up the north bank of the Niobrara. For a few miles we traversed a densely wooded district, but we soon reached the open prairie beyond. Galloping to a gentle eminence, a scene of beauty and magnificence was spread out before us. Far away to the western horizon, stretched this beautiful and vast savanna, varied at long intervals with undulating hills, as timberless as the level plains. South of us, and winding away toward the setting sun, the serpentine course of the Niobrara was traced for a score of miles, while north and east of us, the dark forests that border the swift Missouri were rustled into life by the western breeze. The earth was covered by a rich growth of swaying prairie grass, and, even at this late season, thousands of beautiful flowers added their rich colors to the loveliness of the scene. To the north of our position, a mile or

two out upon the verge of the wooded district, was a large encampment of Indian lodges, which formed an interesting feature in the enchanting landscape. The sun was fast sinking, and, upon consultation, it



FORESTS OF THE UPPER MISSOURI.

was agreed to pitch our tents in a little grove at no great distance from the river, to pass the night there and make an early start upon our expedition

the next morning. Our arrangements completed, our camp-fire lighted, and the evening repast over, three of us paid a visit to our red neighbors. The moon was shining brightly, and the air was just cool enough for comfort.

As we approached the Indian camp, a loud jargon of sounds was heard. We reined in our horses for a few moments to listen, and found that the savages were celebrating their arrival at the buffalo range by a hunting dance. They were assembled upon an open space in the middle of which were squatting the young men of the village, hideously painted and almost naked. A monotonous chant was begun with the accompaniment of the tom-tom, lustily beaten by a stalwart fellow, who at regular intervals added his heavy bass notes in monosyllables, which were about as musical as those of a bull-frog. One of our hunters, who understood the language, translated the words—"We have found the buffalo; he cannot escape; he may flee, but our horses are swift—our aim true; we have slain many; the buffalo shall be food for our people," etc. The tom-tom is a hollow cylinder with a skin tightly drawn across it—a kettle drum. The performer entered with zeal into his work, and his grimaces and gestures showed that he meant "business," if ever the fated buffalo should put in an appearance. The shrill treble of the feminine portion of the company mingled with the guttural tones of the men, and all echoed the burden of the chant. Having proceeded in this manner for a time, becoming more and more spirited, the central group began a rude and savage dance, posturing and assuming all manner of posi-

tions expressive of the wonderful onslaught they proposed to make on the first opportunity, all the while yelling like so many furies.

Our visit was untimely and not altogether safe, for though the tribe was at peace with white men, it is never certain how soon the peace may be broken, and they might not feel inclined to brook anything that might appear to be a disadvantage or hindrance to them, and, besides, the ecstasy and wild enthusiasm to which they had wrought themselves, might lead to more or less "unpleasantness" should we, by any chance, give offense to them. However, at the close of the dance, we approached and through our interpreter, spoke to them. Although previously unaware of our presence, and we had suddenly appeared among them, they evinced no surprise whatever, and answered our salutations in their rude gutturals. Their reception of us, though not positively unfriendly, expressed very plainly that our presence was not welcome to the band, who like ourselves, were in pursuit of game—with this difference, that while we desired only pastime, they sought to procure supplies for the coming season.

We very soon took our leave and returned to camp, where we maintained a strict watch during the night.

About midnight, and just as the moon was disappearing, a slight crackling as of stealthy footsteps was heard, and Barstow, who was upon guard duty, carefully reconnoitred the camp, but only a startled hare was descried, which quickly vanished. Nichols, who was a light sleeper, had

heard the rustling, as slight as it was, and left the tent to confer with Barstow. In silence another hour passed, when the stealthy step was again heard and this time was followed by the barking of one of our dogs; his cry was the signal for the pack to add their voices, and we were all aroused from sleep. At that moment the crack of Barstow's rifle was heard, and upon leaving our tents, we saw two Indians near the place where our horses were tethered, making rapid flight to escape. Fortunately for us, however, the redskins had not succeeded in stealing our horses, as they evidently intended to do, and perhaps more fortunate still, Barstow's shot had missed his mark. No further disturbance occurred, and with both our hunters on guard, the remainder of the night we slept in peace.

The next morning the Indian encampment was not to be seen. Their tippes or tents had been removed and the Indians had disappeared.

The tippi or tent is formed by tying three poles together at the smaller ends, and raising them; other poles are then laid on and secured by a cord; the skin of the buffalo is elevated by a pole on the side of the wind, and is made to envelop the frame. The edges have eyelets and are joined by wooden pins. The base is fully expanded, the poles are thrust into holes in the ground and the skin securely fastened by stakes. An aperture for smoke is formed in such a manner that its position may be changed with the wind. The erection of the tippi, the kindling of the fire, and the cooking are all the labor of the squaw, while her lord and master saunters about, or sleeps, or smokes his pipe in the most comfortable

place he can find. The question of "woman's rights" has evidently never been mooted among them.

In hunting buffaloes, the Indians generally attack the herd from such a direction that the animals will be most liable to approach the camp, and thus render the transportation of the game a less laborious task, for of all things, Indians have a constitutional disinclination for labor, however light, and a chronic contempt for all who perform it. Very many animals are killed, if the hunt be successful. All parts of the creature are requisite to supply their wants and appetite. The skin forms the bed and the tipi; the flesh is cut into thin slices and hung upon poles about their lodges to dry in the open air; the portions which wolves and swine seem especially to prefer, but all civilized beings reject, are the tit-bits for the filthy gormands—the Indians.

The next morning after our night experience, we left the camp and started upon the hunt for large game. West of us, at a distance of about two miles, we "sighted" a herd of antelopes. The beautiful creatures alarmed by our presence, darted away with the swiftness of the wind, but instead of fleeing directly from us, they wound in a graceful circle around us. At length our dogs, which we had purchased in Yankton, dashed after them in hot pursuit, when the antelopes fled precipitately to the river on our left, and we lost sight of them in the dark green woods.

We journeyed westward during the whole of that day, and as night approached we turned our course toward the Niobrara, for the purpose of camping in the woods that border that stream. While settling

the question of locating our camp at a certain inviting spot on the bank of the river, our dogs suddenly began a furious barking, a few hundred yards distant. Hurrying to the place from whence the sound proceeded, we found that the dogs had attacked a half grown bear. His bearship was perched upon his hind feet, with his back close to a large cottonwood tree, and energetically engaged in the manly art of self-defence. A ball from a Henry rifle ended the encounter, and that night we feasted on delicious steaks of bear-meat.

Early next morning we were in our saddles, pushing rapidly on in a westerly direction; and toward night we crossed the Keyah Pahah river, a branch of the Niobrara that flows in from the northwest. No buffalo had been seen, although we had been watching anxiously for them all day. Suddenly, far to the south of us, a low rumbling noise like distant thunder was heard. The sound rapidly increased in volume, and soon what appeared to be a large black cloud was seen low down upon the horizon, and moving rapidly toward us. Our position was perilous; an immense herd of buffaloes was moving down upon us. Our danger and the necessity of immediate flight at once became apparent to us all.

Turning our horses toward a clump of trees that grow on the bank of the Keyah Pahah about a mile and a half northeast of us, we urged them to their utmost speed. We did not look back, but the roar of the living torrent behind us constantly increased, and we fully realized our danger. The panic into which we had all been so suddenly thrown was con-

tinued until we were within two hundred yards of the timber, and the buffaloes were within fifteen or twenty yards of us, when the leaders of the herd changed their course abruptly to the left, and the whole column moved away with the velocity of the wind. Seeing this, one of our hunters wheeled his horse to the flank of the herd and laid two of them low with his rifle.

We now discovered to our horror that Barstow was missing, and felt confident that he had been trampled to death by the buffaloes. Search was instantly made, but in vain, although it was continued all night. The next morning, however, we had the great joy of finding him safe and sound. His adventure formed the subject of a letter to friends across the water. In it he says: "Onward came the dark column like a mighty river, and I began to feel that my race was ended, when suddenly a dark object arose in front of me, upon which my pony sprang with all his force, and then fell headlong to the earth. The momentum that I had acquired carried me several feet in advance of him, and I received a stunning fall. I rose bewildered. The column of buffaloes had passed within twenty feet of me, on my left. My pony was gone and so were my companions. Near me on the ground lay a black wolf, the object that had arisen in my path, now dead. I looked around for the clump of trees, but they were not visible. I started forward in the direction I supposed them to be, but every step I took added to my confusion. It is easier to thread the mazes of a labyrinth than to find a lost point on one of our Western prairies. Darkness set in. I thought of

the immense herd of buffaloes that had passed with the roar of a whirlwind,—I was saved. I thought of my friends who had been swept so suddenly from my sight,—I was lost.

Left alone as I was on the broad prairie, a hunter of greater experience would perhaps have accepted the situation, and made the best of it where he was, but I could not content myself to wait till the dawn of another day to begin the search for my companions. To pass the night alone with a dead wolf was not among the most agreeable things in life; and then the probability that there were dozens more of the same ferocious species in my immediate neighborhood caused a thrilling sensation to creep over me that was not at all pleasurable. I could not build a fire for I had no fuel. Night had set in and I was trying to decide what course to pursue, when I was startled by the long, dreary howl of a wolf. Claspng my gun firmly, I started at once in a direction opposite to that from whence the sound came. Soon, another wolf on my right aired his lungs in the same cheerful way, and directly the whole atmosphere was stirred by such a chaos of happy voices as is to be heard only on the expanding prairies of the Great West. Wishing to treat my serenaders with all the respect that the spirited nature of their demonstrations seemed to demand, I fired my rifle. A pause of a couple of seconds was followed by a howl so long that it seemed as though the whole wolfish tribe had a voice in it.

Pushing energetically onward, my attention was suddenly attracted by a slight rustling in the tall grass a few feet to my right. Before I could assume

a defensive attitude, a large object sprang with a sudden bound upon me. I grappled it with all my strength and threw it from me, when a low whine revealed the fact that it was only one of our own faithful dogs, which had been attracted to me by the report of my gun. The presence of the dog encouraged me to hope that my companions were not far off, and I fired several times, hoping that they would hear the report, and return the signal, but the night wore away and I heard no response.

The first blush of the morning revealed to me that I was going toward the west, instead of the east, and I began at once to retrace my steps. Morning advanced, and a scene of wondrous magnificence was spread out before me. An Eden arose upon my sight. Far away to the east, the landscape rolled, glowing with a profusion of gorgeous flowers. The sun seemed literally rising from a sea of bloom. The picturesque waters of the Keyah Pahah were seen on my left, gleaming in the light of the morning sun and meandering away to the east like a thread of silver. My cheeks were fanned by a gentle breeze, that bore on its wings the perfume of a thousand fragrant flowers.

Wearied with a night of toil and waking, I sought a grassy mound that had been cast up by prairie dogs, and threw myself upon it to rest. I soon fell into a sound sleep from which I was abruptly awakened by the report of a gun, very near me. Hastily springing up, I was rejoiced by seeing my whole party riding slowly southward within three hundred yards of me. They had captured my pony and were now searching diligently for its owner."

After recounting our adventures, we mounted our horses and rode rapidly away to the west.

CHAPTER XVI.

Nebraska—Climate—Scenery—Resources—Beautiful Valleys—Over the Plains—An Ocean Drained of its Waters—Old Fort Kearney.

A beautiful State is Nebraska—a State of greatest fertility, a commonwealth where honest labor is amply rewarded, where skill and culture are duly esteemed, and where progress is the order of the day. Were but the half known abroad of the marvelous resources, the great and increasing facilities for business, the glorious climate and numberless advantages and opportunities for achieving success, offered in each and all of the States and Territories west of the Mississippi, the tide of emigration westward, as great as it is, would become ten-fold greater.

Nebraska was organized as a Territory in 1854, with Omaha as its capital; in 1867 it was admitted to the Union of States.

“Any one who will take a map of the United States and draw a line across it from New York to San Francisco, and regard that line as the middle of a belt extending two degrees north of it, and two degrees south of it, will realize a state of things, perhaps little suspected, but which will cast into the shade the grandest pictures that ever dazzled imagination or immortalized art. That belt includes all that man covets as essential to his happiness, the full development of his powers and the regal sway of his civilization. It includes the States whose



History, population and intelligence make their decisions final in the highest affairs of State, the mountain ranges principally affecting climate, many of the navigable rivers, numerous inland seas, vast productive plains, the principal sea ports, and all the largest cities of the continent. Between these parallels of latitude, enterprise has achieved its grandest successes. Arts and manufactures exist without number, railroads and canals look like a delicate net work spread over its eastern half, and with its lines of telegraph, it realizes the perfect ideal of internal communication. Side by side with the mighty workshops of this region, stand the school, the college and the church.

The resources of the district are almost infinite. Population clusters and grows dense here. Wealth flows into it. It is the great productive garden of the world, rich in lumber, grain, fruit and pasture for countless herds and flocks, while below the surface wealth, lie inexhaustible treasures of gold and silver, copper, iron and coal." Such is the picture drawn by J. M. Wolfe, in his excellent work, and it is true in spirit and in letter.

Nebraska has its place in the very heart of this region. "On the one side are the Eastern States with their manufactures and on the other, the Western Territories with their mineral wealth. To the north the forests of Minnesota, to the south the luxuriant semi-tropical fruits and other productions, while the State itself embraces fifty million acres of agricultural and pastoral lands, than which none on the face of the earth are richer. The surface of the country rises gradually from the Missouri till in

the west an elevation of five thousand feet is attained. Gently rolling prairie, or broad level bottom lands are descriptive terms that will apply to all the surface of Nebraska."

Three large streams traverse the State—the Platte, the Niobrara and the Republican. The Platte, running from east to west divides the State nearly equally. From the north and south at nearly equal distances, numerous tributaries flow through valleys of surpassing beauty and fertility, affording an ample supply of water for all the wants of art and agriculture. The soil is a rich vegetable mould from two to six and even eight feet deep—the accumulation of centuries. Beneath this is a singular lacustrine deposit, referable to the period when a vast lake covered the area now included in the Western States and Territories. It forms about three fourths of the surface of the State of Nebraska and is exceedingly rich in all the elements of vegetable growth. It also obviates the ordinary results of drought and of long-continued rain; as this sub-soil retains the surplus moisture and thus promotes thrifty vegetation; and this remarkable feature accounts for the good roads of Nebraska. In some instances the soil has been cropped for seventeen years without any indication of exhaustion and without the use of fertilizers.

In climate, the Western Territories have an almost infinite advantage over the eastern States in the same latitude. For instance, during the winter of 1871-2 the mean temperature during the months of December, January, February and March, at Helena, Montana, was 30 degrees—precisely the

same that it was at Philadelphia, which is six-and-a-half degrees further south, and four degrees higher than it was at Chicago, which is four-and-a-half degrees further south. As the reader is aware, the isotherms or lines of mean annual temperature do not correspond to the parallels of latitude. When we consider that Helena, which is on the mountains and almost a mile higher than New York or Philadelphia has a more temperate climate than either of the latter places, we may realize the superior advantages of climate of regions between the mountains and the Missouri river.

The climate of this favored region is not to be determined by reference to latitude only, but the elevation of the country, the general inclination of the surface, the rapid course of the rivers, and the absence of low swampy lands, are all to be taken into the account, and all combine in giving to Nebraska an atmosphere, clear, bracing and dry, to moderate the inclemencies of winter and the heat of summer. The pure air of the prairie imparts new life and vigor to the invalid, and is delightful to persons in sound health. The spring often opens in February, and the autumn is protracted to the last days of the year. Cattle roam over these pleasant regions summer and winter without shelter, and find abundant sustenance upon the lands.

Although Nebraska does not have as great a rainfall in a year as most other regions in the same latitude, the average mean rainfall during April, May, June, July, August and September, is three-and-a-half inches—a greater quantity of rain during these agricultural months than Illinois, and little less than

Missouri or Ohio. Snow seldom remains more than a few days at a time. The productions of the soil are those common to the latitude, but in quantity and quality are abundant and excellent. At the Centennial, as many of our readers may remember, the fruit exhibition of Nebraska attracted much attention, and has doubtless told upon the emigration to the State. The supply of timber is not large, but is constantly increasing. Artificial groves are springing up in every direction. The same varieties of forest trees are found in Nebraska as in Kansas. In Lincoln there are salt springs that yield abundantly. Nebraska is, perhaps, not favored with mineral wealth. Stone suitable for building purposes is found in many parts of the State, and is as beautiful as it is desirable. Much of the architectural beauty of the public buildings in Omaha and in Iowa is due to the magnesian lime-stone of Nebraska. There are eight or nine railroads in the State, and others will be constructed at an early day. The Union Pacific traverses the entire length of the State from east to west.

The principal valleys south of the Platte are the Nemaha and Blue; and in the North Platte country the Loup Fork and the Elkhorn valleys. The Elkhorn River rises south of the 42d parallel north latitude, and 200 miles west of the Missouri River, and drains a country of at least ten thousand square miles. The valleys are very extensive and fertile—a paradise for large game. Elk, deer and antelope in large herds may be seen, and in the low hills the hunter finds a great variety of game in abundance. There are a number of promising towns and villages in the beautiful Elkhorn Valley.

None who see the Platte Valley for the first time fail to admire its placid beauty. For six hundred miles, with a width varying from four to twelve miles, the valley extends in a westerly direction, gradually ascending toward the base of the Rocky Mountains, everywhere beautiful with flowers, verdure, crops, natural and artificial groves, and residences, continually bounded by bluffs whose outlines and shadows form ever-changing and enchanting pictures of which the eye never wearies.

"Its direct course and unbroken surface made this valley the popular, indeed the only highway to the West, when stories of the wealth of the Pacific Coast and its mountain ranges, drove men mad with thirst for gold. But a few years ago, caravans of freighters and emigrants slowly toiled along over its grassy surface, or camped in its occasional groves, some to reap a golden harvest, others to fall before the mighty reaper and forget all their bright hopes. The Indians never could reconcile themselves to the unchallenged passage of the white men through their hunting grounds, driving away the buffalo, deer and antelope, and many a ruinous stampede, secret ambush and bloody fight lives in the memory of those times. But for the heroism of the man and women then, these Western States and Territories would still be the home of the wild beast and still wilder savage.

No less interesting is this valley, as an illustration of the way in which the surface of a part of the world was made habitable, and the tremendous agencies by which it was accomplished. Standing upon its bluffs, the story is to be read in characters

almost as clear cut as if the achievement was of yesterday. A lake, oceanic in size, is slowly drained of its waters. These become, in different directions, mighty, turbulent rivers which cut their way down through hundreds of feet of deposit, forming in their subsidence, terraces of various widths, till at last, like the one before us, they roll their shallow waters over beds of sand, wandering from side to side of their valleys, touching alternately, with gentle ripples, the opposite bluffs, whose tops were once swept by their proud and resistless waves. It has been estimated that in the formation of the Platte Valley an area of 2000 square miles of sediment 1000 feet thick, has been carved out and carried away by the tremendous forces at work in some far remote period. The process finished, and a soil was produced, deep, mellow and warm, free from every impediment to the plow, rich in every element essential to the life of plant and tree, and yielding a hundred-fold in return for cultivation.

Kearney, the county seat of Buffalo county, is the junction of the Burlington and Missouri and the St. Joseph and Denver railroads, with the Union Pacific. Old Fort Kearney is now dismantled and the reservation will soon be devoted to settlement and cultivation. The route from this point to the Black Hills is described as direct, easy and well supplied with grass, wood and water. The site upon which Kearney is built slopes toward the valley of the Platte, which can be seen for miles, threading its way through groves and pastures, watering a charming region embraced in seven counties. Believing that sooner or later the State and National capitals



PALACE BUTTE, COL.

Palace Butte rises in an almost dome-shaped mass from a blank wall, on whose sides we can distinguish narrow, silver-like lines, reaching from the top down until they are hidden behind the trees. These, we afterward discover, are waterfalls, fed by the snow above. Without any visible means of support, they seem to cling to the rock for protection.

will be removed, the one from Lincoln to a more central part of the State, and the other from the Atlantic seaboard to the very heart of this great Union, the people of Kearney have laid off magnificent sites for the necessary buildings, when this change shall have occurred, and travelers are invited to look with more than passing interest, upon a spot solemnly dedicated as the seat of Government in the future, and picture the transformation by which the prairie will be converted into spacious avenues and streets lined with palatial buildings, a city bristling with towers and spires, and crowning all, the marble halls of legislation.

With this brief sketch of Nebraska, its present distinction and grand probabilities in the near future, we resume our narrative.

CHAPTER XVII.

The Great Sand-Banks—Wild Animals—A Bear Hunt—The “Bad Lands” of Dakota—The Wonderful Valley—A Night’s Experience—The Black Hills—Harney’s Peak—An Enchanting View from the Summit—Bridger, the Noted Trapper—His Adventures—Wonderful Cave—Diversity of Scenery Along the River.

Toward night, we crossed the Niobrara and encamped on its southern bank. The next morning we rode a few miles to the southward and saw the sand-banks, rising from the plain like snow-drifts, and extending for a distance of many miles, in appearance resembling the foam-capped waves of the sea. This region of sand lies between the Snake and Niobrara rivers on the usual route from Kearney to the Black Hills, and is in strange contrast to the fertile and charming country through which we have passed.

Returning down the right bank of the Niobrara, we passed through a large “village” of prairie dogs. These interesting little animals burrow in the earth, and their villages sometimes cover thousands of acres. They sit around the entrances to their dwellings, and on the least alarm they utter a peculiar cry or bark and instantly disappear. The wild animals of this region are the buffalo, elk, deer, antelope, prairie wolf or coyote, black bear, black wolf and panther. The black wolf, which is seldom seen, is a very fierce and dangerous animal, but the coyote of the plains is exceedingly cowardly.

We camped one more night on the south bank of

the Niobrara, and the next evening, after a hard day's ride, arrived in safety at the steamer. We found the bank of the river in the vicinity of the boat, thronged with Sioux Indians, all eager for barter. The repairs were still going on, and we were therefore compelled to remain here a little longer.

The next morning, a young Indian announced that he had seen an old bear and cub on the bluff of a small creek on the opposite side of the river. Several of the party proceeded at once to the place for the purpose of securing the game. Reaching the mouth of the creek, they advanced for a hundred yards or more, then hastily clambering up the bluff, they soon found the cub in a recess of the rocks, but the dam was not to be seen. By means of a rope they secured the cub without difficulty, but when they dragged it down the cliff, the young bear made a noisy protest, and as the men entered the boat with their prize, they discovered the old bear bounding down the cliff. Just at the mouth of the creek a large rock projected over the water, and toward this point the bear advanced. Several shots were fired at her, but without great effect, and an attempt was made to run the blockade; but at the moment of reaching the river, the bear sprang from the extreme point of the rock directly into the boat. The celerity with which the gentlemen vacated the premises was really astonishing, and extremely ludicrous to persons in a less perilous position. The boat had acquired sufficient headway to carry it out into the current, and with the animals in it, drifted down the stream, while the discomfited men made their way along the opposite bank. Another boat

succeeded, by an ingenious device, in towing the Bear-barge to the shore, where, after no little difficulty, the animals were killed,—an entirely novel mode of bear hunting.

Leaving the mouth of the Niobrara, we proceeded on our course. Several forts are located at various points on the Missouri, but they generally present but little interest for tourists.

Having made the distance of 150 miles above the confluence of the Niobrara with the Missouri, we arrived at the White River, which is nearly a quarter of a mile in width at its mouth. Its length is about 500 miles. Between the head waters of this river and the Black Hills, the famous *Mauvaises Terres* are located. This wonderful valley, usually called the "bad lands," is a natural sink, about twenty-five or thirty miles wide and about seventy-five miles long. From the open prairie on the south, the tourist descends a gentle declivity to the bottom of the valley, which is from 150 to 250 feet below the level of the prairie. A peculiar sensation, perhaps akin to that experienced by a visitor to the catacombs of some ancient city, is felt the moment the traveler steps upon the sterile ground. No vegetation is seen, except a very scanty growth of wiry grass that never exceeds a few inches in height. No sound of life is audible, but an oppressive silence pervades the dismal solitude. Immense rocks of a basaltic character are distributed over the entire area, and the wonderful and fantastic shapes they assume give the appearance of a ruined, ancient city. Sometimes they seem gigantic castles, with walls and moats and battlements and towers;

again they rise in immense columns two hundred feet in height. Dome-shaped pyramids, irregular shafts and massive towers rise before you at every step—taleless monuments of an age of mystery. Fossil remains of gigantic pachyderma—non-ruminant mammals—now extinct, are seen in hollows of the desolate earth, while bones of existing species are scattered around and lie bleaching upon the surface.

The rocks that loom up so grandly and in such various shapes from the bed of the valley, often rise above the level of the surrounding plain. This wonderful locality has the appearance of having once been the bed of a vast lake, or of an underground labyrinth, with endless mazes of fathomless intricacy, from which the covering has been removed, and the entire net-work of mysterious windings revealed to the sight of astonished man. Fancy renders these realms the catacombs of some ancient city, the walls of which have long since been obliterated by the hand of time.

The numerous extensive ruins of New Mexico, Arizona, and other portions of the West, attest the fact that all our great western plains and prairies were once the homes of millions of human beings, and here, perhaps, was their great metropolis. Here, in their great city, with its golden spires reaching to the skies, this people, in their arrogance and pride, dared profane the name of God, and His curse fell upon them; the fire-fiend reigned in their dwellings, or their proud walls crumbled at the earthquake's shock. Such fancies seize upon the wanderer over this silent, weird, wonderful and desolate region.

We encamped one night in this remarkable valley, and were the unwilling witnesses of a natural phenomenon fully in keeping with the general aspect of the place. Having spread our blankets at the foot of a tall pyramid, we laid down to sleep. The night was intensely dark, and we were destitute of the means of kindling a fire; the light of the stars was obscured by great ominous clouds, that rose in the southwest and spread out over the heavens like a pall. The wind sighed mournfully and whistled and shrieked among the towering shafts. Soon a low, rumbling sound, away to the south, gave indications of an approaching storm.

The darkness seemed to increase; and wailing sounds, at first in low, plaintive tones, and then swelling to piercing shrieks, fell with awful distinctness upon our ears. Our position was not altogether agreeable or comfortable, but there was no more hope of safety in flight than in remaining where we were. The wind increased to a hurricane, and blue lights danced around us in the darkness, and seemed to menace us with fingers of flame. It seemed as if all the furies had been loosened upon the earth, and that we were the objects of their special attention. Lightnings flashed, thunders roared and volumes of sand were raised from the earth and dashed down upon us with terrible effect, filling our eyes, mouths and nostrils with a noxious, suffocating dust. Drawing our blankets over our heads, we waited as patiently as possible for the storm to subside. Soon the wind ceased and with its cessation, the dust; the tumult was over, the storm was past; the clouds vanished; the stars shone as brightly, and all was as quiet as ever.



A recent work upon the agricultural resources of the West says, that the whole space west of the 95th degree of longitude, embracing half of the entire surface of the United States, is an arid, desolate waste, with the exception of a narrow belt of rich lands along the Pacific coast. And this writer is an American, who expects, doubtless, to be credited with knowledge of his subject and with veracity. That he is utterly mistaken is well attested. My own observations corroborated by the statements of other explorers, warrant the assertion that the whole extensive region north of the 40th degree of latitude, and lying between the Missouri River and the Rocky Mountains, excepting the sand plains of Nebraska and the "bad lands" of Dakota, of limited area, as already described, is better adapted to agricultural purposes than is the corresponding region lying between the Missouri River and the great lakes.

While the little steamer plied her way around the magnificent bends of the Missouri, to await our arrival at the mouth of the Cheyenne River, the party proceeded across the fertile belt of beautiful country, lying between the Mauvaises Terres and the Black Hills. We traveled in a northwesterly direction, and were far out upon the prairies, when one of our number called attention to a large herd of antelopes. We looked in the direction indicated, and directly in our course, we saw thousands of the beautiful creatures feeding upon the grass and moving about the prairie with graceful freedom. We continued on our way, watching the herd until we were within half a mile of them, when, instantly, and in the most mysterious manner, the whole herd vanished;

not one was to be seen, although but a moment before, the herd had covered thousands of acres. By the aid of our field glass we beheld only an extensive village of prairie dogs, which, by the phenomenon of the *mirage*, had been magnified into an innumerable herd of antelopes. Such phenomena are of frequent occurrence in the West, and many thrilling instances have been related by frontiersmen—sometimes of extreme suffering and loss of life, occasioned by the mirage.

Crossing the south fork of the Cheyenne River, we entered the Black Hills, from the south, about fifty miles west of Harney's Peak—the highest point in the region. These hills were formerly supposed to be an extensive mountain desert. A late writer says: "The extensive region known as the Black Hills, lying mostly in Dakota, but extending into Wyoming, is likely to prove greatly productive of gold, and is certainly rich in timber and general agricultural resources."

In general appearance, we find here a marked resemblance to the Osage country of Missouri, except that instead of the sparsely timbered region of the Osage, we have here extensive forests of the most valuable timber. Fir, pine, cedar, and many of the hard woods are exceedingly abundant. The soil is of great depth and unsurpassed fertility, and the climate, as already remarked, is singularly healthful. The general direction of the range is from southwest to northeast, and it embraces about six thousand square miles of territory. It is reported that rich deposits of gold underlie the western part of the range which extends into Wyoming, though



at the time of our visit there, miners had been prospecting for some time without great success. Gold had been found, but not in sufficient quantities to encourage mining, and the whole country being included in the reservation of the Sioux Indians, who persistently resist any encroachment upon their territory, miners generally do not care to risk their scalps for the small amount of filthy lucre they might expect, under some conditions, to obtain. It is probable, however, that an improved system of mining, under the encouragement of government countenance and protection, would develop as rich mining regions here as are found in Montana or other sections of the great northwest.

Passing eastward along the southern extremity of the hills, we came to Bridgers' Spring, where the water gushes in great force from the limestone rock that rises abruptly at the terminus of a deep glen. From a perpendicular ledge, fully seventy-five feet high, the water pours from an aperture in the rock, about six inches in diameter and thirteen feet from the ground. The stream spouts with such force that it falls into a basin fifteen feet from the wall. Bridgers, a noted trapper of this region, had established his camp a few hundred yards from the spring, and "fool like," as he expressed it, went one morning to the place for a bath, without taking his gun. After he had refreshed himself at the pure fountain and turned to depart, he was astonished to find himself face to face with two stalwart Indians, who, like himself, were unarmed. It became apparent to Bridgers that there was to be a hand-to-hand struggle for life, and taking advantage of the surprise of the two Indians, he sprang with the force

and ferocity of a tiger upon the foremost and sent him reeling to the earth, from which he never rose. The second Indian was a more powerful antagonist, and Bridgers describes the struggle as the "most interesting" he was ever engaged in. The second gladiator was sent to join his comrade in the "happy hunting grounds" over the river Styx.

At the foot of Harney's Peak we came to Bridgers's Cave, the entrance to which is through a trap-like opening in the top of a large rock that looks like the "blossom" of iron ore. Descending about twenty-five feet, we reached the floor of the cavern. Here, by the light of torches, we found a room of immense extent. The roof of the cave was about ten feet above us, and composed wholly of quartz rock. In the light of our torches it sparkled like myriads of diamonds. Following a branch of the cave, leading to the south west, we found another passage connecting with the outer world. In this part of the cave, Bridgers, in passing through, came suddenly upon a large bear; the animal paused for a moment directly in the path, uttering a deep growl that echoed through the passages till the cavern seemed the abode of hundreds of wild beasts growling in concert. It was not an agreeable position even to a man with iron nerves, but Bridgers was equal to the occasion, although armed only with a hunting knife. Escape by flight was out of the question, and the trapper thinking to frighten the animal from his position, began a solo of yells that would have done credit to a whole band of Sioux, the while leaping about and brandishing his flaming torch in the wildest manner. Whoever has heard

Forest in *Metamora*, or ever heard a band of savages rushing to a conflict, can imagine the vocal exercises of Bridgers on this occasion. His performance was a success, and the bear quitted the cave like a whipped cur.

Turning to the south, at a distance of a hundred yards, the walls of the cave were so contracted that with difficulty we passed along an avenue, leading into a spacious chamber, named the "Dome," from the beautiful arched shape of the ceiling, which rises in the centre to the height of fifty feet. The beautiful crystals of quartz that everywhere project from the walls in triangular shapes, reflecting as they do, the hues of the rainbow, constitute a scene of magnificence, far exceeding the adornment of palace or cathedral. Leaving the "Dome," we turned to the right and entered a passage that led us into another beautiful room—"The Chamber of the Fountain"—circular in form, and about forty feet in diameter. In the centre of the floor is a depression or basin, about eight feet in diameter, in which there is a clear and cool fountain.

Returning to the entrance, we visited the home of Bridgers. It is a room about eighteen feet in diameter, and remarkable chiefly for the vast quantity of furs and skins of wild animals that are stored within it.

The trapping season begins in the month of September and continues through all the months that contain the letter "r," though furs taken in midsummer are said to be superior in quality. As soon as the season for trapping ends, the trapper on the Missouri and its tributaries begins to construct his

raft, upon which he usually transports his furs to a suitable market—that he may have it in readiness to launch upon the first favorable rise in the waters, which usually occurs about the first of June.

Leaving Bridgers sole monarch of an extensive region west of Harney's Peak, we wended our way to the very foot of the grandly picturesque pile that rears its proud summit to the regions of cloud-land. Finding a suitable grazing place for our horses, we then began the toilsome ascent of Harney's Peak. Upward we went, winding our way carefully around numerous projecting crags, climbing cautiously over heaps of fragmentary rocks, or clinging to some stunted cedar that had dared to maintain its existence in this exalted position, despite the barrenness of the rocks upon which it had established itself, and the general war of the elements that is continually waged against it. Finally, we reached the summit, and the first glance of the grand and delightful panorama that was spread out before us repaid us a thousand fold for all the fatigue of the journey. North of our position and covered with stately forests, the low hills extend in an endless succession until they are lost in the blue sky; while here and there a towering peak rears its crest defiantly, the gray summit in striking contrast to the dark green of the forests below. Eastward, the South Fork winds its tortuous course, appearing and disappearing among the tall trees that fringe its banks, coursing through chasms and canons of vast depth, and steadfastly onward till it finally unites with the broad Missouri. Southward, the dark green foliage of the timber land gives place to



the lighter hue of the grand prairie, which rolls away in gentle undulations to the setting sun—a limitless field of perennial verdure and beauty. In the centre of this expansive meadow, the dark vale of the Mauvaises Terres is seen, silent and desolate like the shadow of a dark cloud. Moses on Mount Nebo, with his eyes resting upon the paradise of the Hebrews, did not look upon a land more beautiful, a scene more enchanting, than that within the scope of our vision. Beautiful land of Dakota, which will yet be the delightful home of millions of freemen!

Without accident we accomplished the perilous descent, and after spending another day in the vicinity of the lofty Peak, took up our line of march towards the East. Recrossing the South Fork, we followed the course of the Cheyenne river, which, a large portion of the way, led through a fertile and beautiful valley, until we reached the bank of the broad and rapid waters of the Missouri, and again embarked in the brave little steamer that, after panting hard to reach the designated point, arrived almost at the hour we reached the river.

The waters of the Missouri become less muddy as we ascend the stream, till finally they become as clear as Lake Superior, and the tiniest fish may be seen swimming in the depths below.

Moving on up the river, we pass the mouths of several smaller streams, when our course deviates from a northern direction, and we begin to swing gradually around to the west. This point in the river is known as the "Great Southwestern Bend." There are several forts located in this region, at one

of which our Kansas friends, Messrs. Lawrence and Forristall, landed; but after transacting the business upon which they came, rejoined our party.

There is a great diversity of scenery on the banks of the Upper Missouri. As we move smoothly along on the bosom of the great river, the scene is one continual dissolving view. Prairie and forest, forest and cliff, and cascades in tributary streams, succeed each other. In one place, we see an Indian peering cautiously over the tall cliff that overhangs the river; in another, we descry a large band of Indians on the open prairie, performing their daring feats on horse-back; occasionally we get a glimpse of a gigantic elk in the timber, or a large bear moving lazily out of the water and toward the thick underbrush; herds of deer are frequently seen upon the high, verdure-crowned banks, gazing with wonder-eyes upon the approaching steamer; large flocks of birds, perched upon the huge limb of a grand old forest tree, that offer a ready target for the sportsman, are often seen; and here and there, by day or night, the scene is either novel or sublime.

We are nearing the western boundary of Dakota, that attractive region of which the reader expects a more extended notice, and that demand I will try to answer.

CHAPTER XVIII.

Dakota—The Red River Country—Large Farms—The Dakota System of Farming—The Lumber Interests—Bismark—Emigration.

Until within a few years little was known of the resources or general character of the Territory of Dakota, and it was regarded as uninhabitable; but of all our Territories there is none that offers greater inducements to settlers than this. It is more than three times as large as New York, and about four times the area of Ohio, embracing 150,932 square miles, being nearly 400 miles square, and having more acres of arable land than any other State in the Union, except, possibly Texas. It extends from the Red River—the western boundary of Minnesota—on the east, to the confluence of the Yellowstone and Missouri on the west—from the 97th to the 104th degrees, west longitude; and from the British Possessions on the north, to Nebraska on the south.

The course of the Red River from Traverse Lake in Dakota, to Lake Winnipeg, is almost due north. There are a dozen large rivers and their tributaries, and several small lakes in the Territory. The only mountains are the Black Hills, in the southwestern part.

Dakota is emphatically an agricultural region of unsurpassed fertility, and the extent to which this industry is carried on would astonish a New Eng-

lander. As the reader is aware, the Northern Pacific Railroad traverses this wonderfully productive Territory. The great staple of the region through which the railroad extends, as, indeed, of the entire Territory so far as it has been settled, is wheat. In 1879, one single wheat-field, not far from the Missouri River, embraced an area of twenty thousand acres and yielded two hundred thousand bushels of wheat. A farm thirteen miles from Bismark contained 12,000 acres, of which 1,500 were under cultivation; another contained 7,000 acres, of which 1,100 were improved, and the list might be continued. Large farms here seem to be quite the fashion. Bishop Peck, in speaking of the resources of the Territory, says: "Imagine a vast plain, somewhat undulating, yourself in the midst of it, and splendid farms and unbroken farming lands extending to the horizon in all directions, and then think *two thousand* miles on beyond—nearly every acre sandy loam, vegetable mold or alluvial deposit, from two to six feet deep, the greater proportion of the whole richer and finer than the gardens of the East, and you will have some idea of the productiveness of the Northwest."

The very large farms are an evil. They have generally been obtained by railroad bonds in the hands of sharp-eyed parties when the Northern Pacific suspended. The large and increasing number of small farms—from 160 to 5,000 acres—are more hopeful as to population, bringing into neighborhood the large immigration and advancing all the forms of civilization—the great hope of the country; while the magnates on the ten, twenty and thirty

thousand acres will imitate the manorial greatness of the old world, demonstrate on a grand scale the capabilities of the soil, and for a generation hold large control over the social and civil interests of the country. In the days of their early descendants these vast estates will be broken up and portioned off, for the good of the greatest number.

A writer in Harper's, says of this vast Territory: "In 1869 we rode over this former hunting ground of the Sioux, where, through by-gone ages, they chased the buffalo and fought the Chippewas. The valley of the Red River was a vast expanse. No hill, no undulation, nothing but the fringes of trees along the streams, bounded the sight. It was a reach of prairie unbroken by the plow. The song of meadow lark, plover and curlew and other fowl, alone broke the solemn and oppressive stillness of the solitude. At Georgetown, the Hudson Bay Company, had erected a house, and two or three settlers had set up their cabins on the banks of the river. Now the locomotive is speeding its way across the Valley on to the Missouri, and beyond to the Yellowstone, down the valley to Winnipeg, and soon it will thunder far away in the distant north-land. Farm-houses dot the landscape, towns have sprung up, and marvelous the change; in 1869 a furrowless plain, in 1879 a harvest of eight million bushels of grain. In Dakota, a farmer may mount his sulky plow, ride till noon, if his acres extend so far, and reach home at night, with a returning furrow. When we reflect that the Red River Valley alone, if under complete cultivation, has a capacity for the production of five hundred millions bushels



of grain, what may we not predict of the capacities of this summer wheat-field, equal in area to the States of the Union east of the Mississippi."

Farming is carried on very differently in Dakota from the manner practiced in the Eastern States. Instead of one team with a single plow, the Dakota farmer calls in requisition 15 or 20 gang plows with powerful teams, managed by a man riding on a sulky, with furrows so wide, taken altogether, that he would plow an area equal to an entire farm, of the Eastern pattern, every day, and a tract equal to the entire State of Rhode Island, were its 1,300 square miles of surface all arable land, in less time than the New England farmer requires to plow his little farm. Ten to twenty teams follow each other around a field of wheat, drawing reaping machines, which cut an immense swath, binding every straw as they go, and pushing bundles off from each machine so fast that you cannot count them. Threshing and cleaning are equally wonderful. Large machines are worked by steam, and the straw is used for fuel—the machine pulling it in and feeding the flame with its own fingers—while the pure wheat rolls out so fast that you can hardly put it into sacks, when it is moved off to market in bulk.

The valuation of the machinery employed in this region amounts to millions of dollars annually, and will continue to increase with the growth of the country. Its manufacture adds to the wealth of the East, for the greater part of it is made there.

The reports of starvation in foreign countries are in strange contrast with the facts and figures concerning the abundance with which the wheat fields of Dakota are crowned.

It will be interesting to note the destination of all this wealth of grain. In Minneapolis, Minn., alone, as it appears from the statistics, there are twenty-two mills that grind from 13,000 to 15,000 barrels of flour every day, requiring about eight millions bushels of wheat per year. When the mills, now in process of completion—perhaps in 1880, and surely before the winter of 1881—not less than twelve millions bushels of wheat per year will be made into flour in that city alone. There are now five hundred miles of direct line of railroad, from Duluth, on Lake Superior, to Bismark, Dakota, with great and extending branches added, and in September and October the trains are literally burdened with wheat, eastward bound, with markets in Chicago, Cincinnati, St. Louis, New Orleans, Buffalo, New York and Europe. It is now but eighteen days from Minneapolis to Liverpool, and when the canal is completed, ships for the old world will be loaded from the wharves of Chicago. This grand result must come within five years, as must also the completion of the Northern Pacific Railroad, to Puget Sound, bringing the vast tonnage of the North Pacific Ocean from Asia directly across our northwest.

The grazing lands of Dakota are unsurpassed. Vast herds of cattle graze here, even during the winter, and all herders have to do is to "back fire," so that the grass, which dries and becomes like hay, will not be destroyed.

Lumber from the forests of the North is bringing millions of dollars into this great and promising Territory. The grand Falls of St. Anthony, Minn., utilized as a water power, gave in 1878, the enormous



quantity of 130,275,000 feet of lumber; and this is annually increasing. The upper Mississippi and other rivers are literally crowded with logs, feeding other mills, and making an estimate of the lumber trade of the Northwest incalculably large.

All other industries are prosperous and achieving the grandest results, and it may be safely predicted that, within the next decade, Dakota will be as populous as is Kansas to-day.

Prominent among the towns and settlements of Dakota is Bismark—the germ of a great city in the near future. It is beautifully situated on the east bank of the Missouri, and was for a time noted as the temporary western terminus of the Northern Pacific Railroad, which is now being rapidly extended westward. The history of Bismark begun with the completion of the road to this point in 1873. It is already of importance and will doubtless be the great city on this great national highway, and the terminus of one or two other great lines of railway from the northwest; it is also safe to predict that it will be the capital of the northern division of the Territory, when it is divided on an east and west line, which is being advocated by different sections of the Territory.

It is a fact, perhaps not generally known, that the Missouri river is navigable for twelve hundred miles above this point; there were in 1879 not less than 25 steamers of the capacity of from 350 to 1200 tons, engaged in the river trade.

The growth and prosperity of Bismark have been marked and peculiar. The principal source of its commercial prosperity has been the very extensive

overland and river business from here to the Black Hills, and to the several military posts and Indian agencies west and north.

Although situated in the midst of a most fertile agricultural region, little was attempted in the way of cultivation of crops until 1879, as other departments of industry, trade and enterprise were highly remunerative, but the influx of emigration will within a year or two, at longest, cause the fertile fields adjacent to yield abundantly their wealth of produce. Bismark has a population of about 3,000.

Statistics show a continued increase in the number of British subjects arriving in this country. Fully one-third of the number are from Canada, and another third from England, where there has been a general prostration of agricultural industries. Nearly all immigrants from Great Britain bring money to purchase land, and are coming in colonies prepared to start thriving communities in the West, on the public lands. Naturally enough, they go to the Northwest, Dakota and Minnesota receiving the majority of them. Of the immigration from Great Britain, but a very small per centage remain in the East or in cities.

The immigration to the United States, in 1880, will approximate 250,000—landing in the City of New York. It is especially stimulated by the destitution in Ireland. The German military conscription operates, in like manner, to create discontent at home and longings for the free, broad acres of the new world.

Of course, at the present time, the Territory of Dakota is sparsely populated. It is said that a

gentleman not long since made a considerable journey across the prairies of Dakota, and met only one man on the whole trip; and this man said he was "just stepping over" to his neighbor's farm, to make a friendly call. The closest observation with a field glass of great power could not reveal the outlines of a house anywhere, and, to the question how long he intended to keep "stepping" before he reached his neighbor's place, the answer was—"Well, I am lost there now, I've only six miles to go yet, but at spring we had'n't any very near neighbors."

Over this region of country, extending as far to the North as Athabasca Lake, large enough for ten or twelve States the size of New York, Nature has given a climate suited to the culture of summer wheat. There are vast reaches which in coming years will furnish rich pasturage to flocks and herds, as they now do to the buffalo. It is a region from which the buffalo never departs; it is his summer and winter haunt. Where buffaloes can find pasturage, men can live and carry on successful husbandry. Although the winters of Dakota are as cold as in central New York, there is far less snow. By the middle of March or the first week in April, the ground has thawed sufficiently to permit farming. Since the first furrow was turned in the Red River Valley in 1870, there has been no failure of crops from drought, rains, blight, mildew, or rust. The region is one of the fairest on the continent.

CHAPTER XIX.

The Upper Mississippi—Natural Scenery of Minnesota—Beautiful Lakes and Rivers—Climate—Chief Cities—Wisconsin—Features of the Country—Wonderful Earth Mounds—A Visit to the State Capital and other Cities—A Scrap of History.

Crossing the Red River, the traveler enters Minnesota, which has an area of 83,531 square miles. The State is centrally located midway between the North and South Poles, midway between Hudson Bay and the Gulf of Mexico, and midway between the coast ranges of the Atlantic and Pacific, and on the height of land of the continent. From Minnesota descend three water-sheds—from the north, the Red River system; from the south, the Mississippi and Missouri; and from the east, the St. Lawrence system. The soil is porous, and moisture is quickly absorbed. The land is rolling, presenting a natural drainage. The State is so far from the Atlantic that the east winds scarcely reach it, while the warm winds of the Pacific, deprived of their moisture by the Rocky Mountains, give it an early spring, with but little moisture. It has but 25½ inches, during the year, in the form of rain or snow, with healthful influences all around. There is no spot in the State especially favored, but for hundreds of miles west of the Mississippi River the invalid will find an immunity from Consumption.

During the winter, in Minnesota, the thermometer often ranges from 18 to 20 degrees below zero,

but no such intensity of cold is felt, so dry and pure is the atmosphere. Persons who would not think of walking out in their native states with the thermometer at zero, go abroad with impunity, in this climate, with the mercury fifteen or twenty below. In fact the State has a peculiar climate, differing, in some respects, from that of any other part of the continent.

The surface of the country is diversified with rolling prairies, vast belts of timber, oak openings, meadows, waterfalls, wooded ravines and lofty bluffs, which impart variety, grandeur and picturesque beauty to the scenery. The Mississippi River rises in Lake Itasca, a very small body of water in the northern part of Minnesota and flows south-easterly through the State 797 miles, 134 of which forms its eastern boundary. It is navigable for large boats to St. Paul and above the Falls of St. Anthony for smaller boats, for a considerable distance. The season of navigation usually opens about the middle of April, and closes about the middle of November. The river not unfrequently remains open till the first of December.

The Minnesota River, the source of which is among the Coteau des Prairies, in Dakota, flows from Big Stone Lake, on the western boundary of the State, a distance of nearly 500 miles through the heart of the southwestern part of the State, and empties into the Mississippi at Fort Snelling, five miles above St. Paul. It is navigable, at high stages of water, to the Yellow Medicine, 238 miles above its mouth. The St. Croix River, rising in Wisconsin, near Lake Superior, forms a part of the

eastern boundary of the State. It flows into the Mississippi nearly opposite Hastings, and is navigable to Taylor's Falls, about 50 miles. It penetrates the pineries and furnishes immense water-power along its course. The Red River is navigable from Breckenridge, at the mouth of the Bois de Sioux River, to Hudson's Bay; the Saskatchewan, a tributary of the Red River, is also navigable, thus promising an active commercial trade from this vast region, when it shall have become settled, via the St. Paul and Pacific railroad, which connects the navigable waters of the Red River with those of the Mississippi.

Among the more important of the almost innumerable small streams are Rum River, valuable for lumbering, Vermillon River which is full of the most beautiful cascades; the Crow, Blue Earth, Root, Sauk, LeSueur, Zumbro, Cottonwood, Long Prairie, Redwood, Warajou, Pejuta Ziza, Mauja, Wakau, Buffalo, Wild Rice, Plum, Sand Hill, Clearwater, Red Lake, Black Thief, Red Cedar and Des Moines Rivers. There are more Indian names of rivers, lakes and towns in Minnesota than in any other State in the Union. The St. Louis River, a large stream flowing into Lake Superior, navigable for twenty miles from its lake outlet, furnishes a water power at its falls which is said to equal that of the falls of the Mississippi at St. Anthony.

Lake Superior extends along the eastern boundary of the State for a distance of about 170 miles. It is indented with many beautiful harbors.

The mineral wealth of the State is chiefly copper, iron and coal. The soil is well adapted to agricul-

tural pursuits. It is of a dark, calcareous, sandy loam, containing an intermixture of clay, abounding in mineral salts and in ingredients derived from the accumulation of decomposed vegetable matter, for long ages of growth and decay.

The word "Minnesota" signifies, in the Indian tongue, "sky-tinted water." In 1689, the French took possession of the country and erected a fort on the shore of Lake Pepin. "In 1695 a second fort was built on an island in the Mississippi just below the mouth of the St. Croix; another fort was built on the Minnesota the following year. The fur traders now came into the Territory in great numbers, but no permanent settlement was made. In 1763 Capt. Carver of Connecticut, visited Minnesota and published a description of the country. In 1800 that part of Minnesota east of the Mississippi was a part of Indiana. After the Louisiana purchase (1803) of the lands west of the Mississippi, Fort Snelling was erected and garrisoned by the United States. The Territory was already the seat of an active trade with the Indians and the government had some trouble with the traders. In 1820 Minnesota was explored by Gen. Lewis Cass and three years later by Maj. Long. A third exploring party was sent out in 1832, under H. R. Schoolcraft, who discovered the source of the Mississippi River." In 1842 the town of St. Paul was founded and settlers from various parts of the country began to arrive. Minnesota was organized as a Territory in 1849. At that date half of the land within its border was owned by the Indians. In 1858 Minnesota was admitted as a State.

The chief towns and cities are located on the Mississippi and are Winona, Wabashaw, Lake City, Red Wing, Hastings, St. Paul, Minneapolis, St. Anthony, Dayton, Monticello and St. Cloud, but other places are rapidly assuming importance.

St. Paul is fast becoming an immense manufacturing city, and the centre of a trade both thriving and lucrative.

Mr. Barstow has permitted me to glance over the leaves of his diary of American Travel, and to make an extract from his notes of a trip on the upper Mississippi, from Galena to St. Paul.

"The boat shot boldly out upon the Mississippi on the way to Minnesota. But how shall I describe the pleasant surprise I experienced in the panorama of nature's living beauty that passed before us? It was a delightful moonlight night, in August, a few days after leaving our exploring party on the plains of Kansas, for the purpose of making this trip, having been enchanted with the river scenery from this point to St. Louis, and having an irresistible desire to trace the beautiful river to its source in the distant North. The recent rains had given to the summer verdure the beauty of Spring; and everywhere before us the mighty river, now swollen by the rivulets of the vast water sheds, kissed the foliage of the shores and murmured around innumerable islands, and these we saw scattered along the broad river for four hundred miles in diversified positions and varying light and shade, all the way from Galena to St. Anthony. No sooner had we passed one group, than we were in the midst of another. Meeting the islands at

almost every turn, gave the pleasant illusion of a sail through innumerable picturesque lakes. Sometimes we were gliding by frowning bluffs on either side. Nothing can surpass the grandeur of the upper Mississippi.

"It is not strange that I should be fascinated, while floating through this western paradise, over which the moon shed her soft, silvery light, and where the notes of the whip-poor-will rose and died far away. But these grand old bluffs must also be seen by day, to be fully appreciated. Then their red cliffs, wreathed with foliage, are very beautiful. The rocks generally have this reddish hue and are often shaded like the finest painting. It is not possible to describe the tint of these masses of rock. I have seen nothing on the Rhine, that is more picturesque and beautiful.

"There are flourishing little towns all along these shores. Winona, 229 miles above Galena, is a growing place. I was surprised to see the immense quantities of freight brought there. There were two or three hundred people about the landing, many of them with torches, by the light of which the freight was landed.

"Long after midnight I remained on deck, to get a sight of Lake Pepin. This beautiful expanse of water is about forty miles long, and from two to five miles wide. It is said to be very deep and to have no perceptible current. In the vicinity, we find little groves of hemlocks, pines, tamarac and cedar. Near the head of the lake is Maiden Rock, that rises abruptly from the water to a great height. Here tradition locates an Indian tragedy, which is given by

Seymour in his 'Sketches of Minnesota:' 'About half a century ago an Indian belle, whose name was Winona, of the tribe of Wabasha, formed an ardent attachment for a young hunter, by whom her attachment was reciprocated. Her parents, however, preferred to have her unite her hand with a young warrior who had distinguished himself in battle against the Chippewas. The warrior's suit being rejected by the daughter, the father threatened that she should be united to him on that very day. The family were then accompanying a party on an excursion up this lake, and were encamped near this rock. The maiden ascended to the summit, and with a loud voice upbraided her friends below, for their cruelty to the young hunter, whom they had driven into the forest, and cruelty to her for opposing her union to the only man whom she loved, and endeavoring to make her faithless to him, by compelling her to marry another. She then commenced singing her death-song, and regardless of the entreaties of her friends and parents, who promised to relinquish all compulsion, she threw herself from the precipice and fell a lifeless corpse.'

"Passing Red Wing, 333 miles, and steaming on for a distance of nearly thirty miles, we arrived at Prescott, near the confluence of Lake St. Croix and the Mississippi. The St. Croix is in the midst of an interesting and picturesque region, and here forms the boundary line between the State and Wisconsin.

"The Mississippi is now growing narrower, the currents more rapid and we near St. Paul. Arriving at this beautiful city, I proceeded by stage over the prairie, on the way to the Falls of St. Anthony.

I crossed the wire suspension bridge from St. Anthony to Minneapolis, a lovely little city, as enterprising and as flourishing as St. Paul, which is saying a good deal, for of all the live cities thus far seen, there is none more brisk and enterprising than St. Paul. The sites of both Minneapolis and St. Anthony are delightful. They are built on level ground, with an illimitable expanse of fertile prairie, gently rolling away to the distant horizon. I made a hasty visit to Fort Snelling, formerly the Indian frontier, but the Indians have long since 'moved on' and are no longer in the vicinity. Returning from the Fort, I visited the Falls of Minnehaha, not only notable in Longfellow's charming "Hiawatha," but exceedingly beautiful and grand, and returned to St. Anthony by Lake Calhoun. Lake Minnetonka is a larger and more beautiful body of water, still further south. It is said that the distance navigable, between the several rapids above St. Anthony, is about 300 miles.

"Far to the north, the river banks become lower and the stream winds through tamarac swamps and forests of cedar and fir. What a net-work of lakes and rivers between the sources of the Mississippi and Lake Superior!

"About ten miles distant from St. Paul is Great Bear Lake, a very beautiful sheet of water, which is a favorite resort in summer. Lake Minnehaha and Green Lake, not far distant, are both exceedingly interesting to tourists.

"I made a flying visit to Madison, the capital of Wisconsin, which is certainly one of the most delightful cities in America. The city is almost sur-

rounded by four beautiful lakelets—Mendota, Monona, Waubesa, and Kegonsa; of these Mendota is the largest, extending over an area of fifty square miles. The shores are of white gravel, and the water, which is fifty feet deep, is as clear as crystal. Monona is not quite half as large, but is quite as beautiful. The other two lakes are very small—not over three miles in length by two in width—little sheets of silver upon an emerald ground. The city is in the valley with hills and groves in the background,—a picture of beauty such as I have nowhere else seen, rewarded my visit to the tower of the Capitol. What a marvelous panorama met my sight! Below me was the city, and as far as the eye could reach was spread a lovely and picturesque landscape. Little wonder that the Madisonians are proud of their city, which for beauty is not surpassed on either continent. The Capitol, of white limestone, stands in a beautiful park of fourteen acres, surrounded by an iron palisade. With schools of the highest order, many fine churches, elegant residences, imposing stores, university, asylum, first-class news journals, and all the appointments and surroundings which taste, enterprise and wealth can give, and with a healthful climate, Madison is a charming place for residence.

Milwaukee, notable for its extensive grain trade, its elegant homes, its picturesque location, its general enterprise, its benevolent institutions; Racine, one of the leading cities of the State in all respects; Fond du Lac, Oshkosh, and Janesville, are all flourishing and charming cities, all eminently prosperous and evidence the signal enterprise, the taste and refinement of their citizens.

Wisconsin embraces an area of 53,924 square miles. There are no mountains in the State, on the contrary, the entire surface is a vast plain, broken only by cliffs that fringe the lakes and rivers. The general elevation of the entire region is one thousand feet above the level of the sea, but some of the lands bordering on Lake Superior are much higher—perhaps 1,800 feet.

“In the southwestern part of the State there are numerous mounds, some of them of considerable proportions. Among the latter are the Blue, 1,723 feet above the sea; the Platte, 1,281; and the Sinsinewa Mounds, 1,169 feet above the sea. These elevations formerly served as guides for the adventurer. There is also a class of ancient earthworks still visible in Wisconsin, containing many peculiarities. They have been made to represent quadrupeds, birds, reptiles, and even the human form. In the vicinity of the well-known Blue Mounds, there is a specimen of these earthworks representing a man. It is a hundred and twenty feet long, with a body over thirty feet wide, and a well shaped head. Its elevation is six feet above the surrounding prairie. The mound at Prairieville is a very faithful and interesting representation of a turtle. The body is nearly sixty feet in length, and the shape of the head is still well preserved.

“Not far from the Four Lakes there are over a hundred small mounds, of various shapes and dimensions; and in the same neighborhood fragments of ancient pottery, of a very rude kind, have been found. A well formed mound near Cassville, represents a mastodon; which has given rise to many

speculative opinions, among which is that very reasonable one, that the ancients who built these earth-works, were cotemporaries with that huge animal. This theory is strengthened by the presence of mastodon bones in these mounds."

The prairies differ in no respect from those of other Territories already described. The oak openings in the south-eastern part of the State are also a remarkable feature. In the regions of the Fox and Wisconsin Rivers and Green Bay, the timber increases in quantity and value, and the soil changes from a vegetable mould to a sandy loam.

Wisconsin is rich in minerals, especially lead, copper, and on two of the rivers, beautiful marble of light pink with veins of deep red are found.

The lakes and rivers are generally beautiful. Besides the great lakes Superior and Michigan, which bound the State on the north and east, there are a number of smaller lakes, several of which are noted for the unrivalled beauty of scenery. "These small lakes," says Lippincott's Gazetteer, "are most abundant in the north-west, and are generally characterized by clear water and gravelly bottoms, often with bold, picturesque shores, crowned with hemlock, spruce and other trees. They afford excellent fish. In the shallow waters on the margins of some of them grows wild rice, once an important article of food with the savages of this region."

The rivers generally flow into the Mississippi. The climate is remarkably healthful and though the winters are cold and long, there are few sudden and violent atmospheric changes. For beauty of scenery Wisconsin is unsurpassed by any other region in

the North or West. If Minnesota can boast of being a better wheat-growing State, Wisconsin can show that the farm productions of her 5,795,538 acres of improved land in 1870 were even then estimated at \$326,765,238. What a glorious outlook is there for both States, when immigration shall have peopled the fertile regions now waiting the coming of willing hands!

Wisconsin was organized as a Territory April 20th, 1836, and admitted to the family of States May 29th, 1848. Within a period of 166 years, Wisconsin was successively under the government of France, Great Britain, Virginia, Ohio, Indiana, Illinois and Michigan—two Kings, one State, and four Territories. But it must not be supposed that the Wisconsinites are an ungovernable people.



CHAPTER XX.

The Valley of the Yellowstone—The National Park—Scenery of Exquisite Beauty—Yellowstone Lake—The Grand Canon—Wonderful Natural Features—The Great Falls—The Upper Falls—Firehole River—Wonderful Geysers—Mystic and Shadow Lakes—A Mountain of Glass—Mt. Blackmore—Route to the Park.

A few more revolutions of the steamer's wheels and we arrived at the mouth of the Yellowstone, in the northern part of Montana, a point in the eastern boundary of that Territory, in latitude 48 degrees north, longitude 104 degrees west.

The natural scenery of this region is surpassingly beautiful. Here two great rivers, each more than half a mile in width, both of which have traversed the greater part of this picturesque and glittering Territory, from west to east, unite their waters and flow onward in sublime silence to the great ocean, three thousand miles away.

We had scarcely passed the forts and crossed the line of division of the territories, than we landed and started upon a tour of exploration along the lovely valley of the Yellowstone—the Cashmere of America. It is a region of rare beauty, unsurpassed in magnificence by any in this country or in the world. Its scenery was ever new, ever delightful, wonderful and grand, though we traversed the country for days and weeks in succession.

Tourists have given to the reading public occasional pencillings of the wonders of this region, but a description which would convey an adequate idea of

the wonderful scenery which everywhere startles with amazement and delight, even were such a description possible, would fill the largest volume; but language, however truthful, however fervid and forcible, is utterly insufficient to enable the reader to form a just conception of the grandeur and sublimity, the exquisite beauty, the immensity and picturesqueness of the natural features and scenery here presented to view. The whole vast region is a grand panorama of perpetual surprise and delight, a numberless succession of pictures painted by the Almighty, the setting, the eternal hills.

The National Park, in the northwest corner of Wyoming Territory, is unequalled in the variety and magnificence of its scenery by any region on the globe. The Park embraces an area of fifty-five by sixty-five miles, entirely surrounded by lofty mountains, whose snow-capped peaks tower upward in awful grandeur to the height of ten or twelve thousand feet. The Park presents alternate lake and forest scenery, low ranges of volcanic rocks, and regions abounding with boiling springs and spouting geysers. It is a field of wonders, interesting alike to the traveler and the scientist.

In this region is Yellowstone Lake, the source of Yellowstone River. Viewed from any of the adjacent peaks, the lake appears like a broad sheet of polished silver, of irregular shape, and spread with perfect smoothness upon the plain below, while the river, which winds away in a northerly course, appears like a thread of silver. Yellowstone Lake is a miniature ocean, with its setting above the clouds. It is diversified by gulfs, bays and harbors. Its tri-

butaries are a few short mountain torrents, which pour their clear, cold water into its crystal depths. The level, sandy shore is in many places very broad, and thickly scattered over it are stones of agate, cornelian, chalcedony and various crystalizations.

With the exception of Lake Titicaca, in Peru, the Yellowstone Lake, in altitude, exceeds any great body of water on the globe, being 7,475 feet above the level of the sea. Its area is 300 square miles, and its greatest depth about 300 feet. Although it is now but 20 miles in length and 15 in width, it was formerly a vast inland sea. The lake has six projections or arms—four extending toward the south, one towards the west, and the other towards the north. The foot-hills about the lake are generally clothed with forest trees; beyond, there is a volcanic range, the naked peaks of which stand in bold relief against the sky. From any of these high elevations, the view of the lake and its surroundings is exceedingly beautiful, its azure surface being studded with emerald islands. In the opposite direction, snow-clad mountain ranges, in endless succession, rise before you, varying in altitude, but invariably grand, picturesque and sublime.

Upon the eastern side of the lake are small prairies, the grazing ground of vast herds of elk, while in the pine forests which border these plains may be found grouse and other game, the only claimants for the varieties of berries that in this vicinity grow in profusion.

The passage around the lake is attended with difficulties. Ranges of rocky hills—off-shoots of the loftier mountain ranges adjacent—extend down



to the waters' edge, and form picturesque promontories over its margin; while dark forests of gigantic pines, with recesses of deepest gloom, hang like a pall around the shore. In some places near the waters' edge, and even extending into the lake, are hot springs.

A few miles below the foot of the lake is the Grand Canon, one of the most gigantic and picturesque rock-rifts in the world. Peering over the edge of the precipice, far down into the terrible depths, the river is seen more than a thousand feet below, a ray of light amid eternal walls of grandeur. So deep is the awful chasm, that, though the water dashes over precipices with the roar of an avalanche, not the faintest sound is borne aloft to the ears of the wondering beholder. A silence almost painful but sublime broods over the scene.

A few miles below the Falls, the descent into this stupendous chasm may be made, though the attempt is daring and perilous in the extreme. Viewed from below, the dark gray walls loom up to such a terrible height that they seem as if they might almost imprison the soul itself. Numerous steam jets and boiling springs, strongly impregnated with sulphur or alum are seen at almost every step, as the traveler pursues his way up the Grand Canon toward the Great Falls. In many places these springs have cast up craters to the height of four or five feet, which are formed by concretions of sulphur, lime, silica and other chemical ingredients. The water in these springs is of various colors, from a copperas-green to a light pink or an indigo-blue.

The most remarkable and interesting feature of

the Canon is the Falls. Here an immense sheet of water, one hundred and fifty feet in width, leaps over a tremendous precipice three hundred and fifty feet high, and falls, with a roar like Niagara, in a broad and solid sheet, into the depths below. Tall columns of fleecy foam and snow-white spray arise from the wonderful basin, and stand motionless like pillars of cloud—rainbow tinted to their very tops.

The Upper Falls are situated about a quarter of a mile above the Great Falls, and are about 125 feet in height. A short distance above, the course of the river is through a beautiful stretch of meadow land, which suddenly gives way to sharp basaltic ridges through which the rapid river dashes with terrible fury. For a little distance above the Falls, the river is broken into furious rapids; and a little further on, the immense volume of water leaps suddenly over the terrible precipice into the yawning depths. As the waters rush in fury over the jutting rocks and dash wildly down upon the rocks below, they are broken in their fall, into a sea of silvery spray, the tiny atoms of which reflect with wonderful brilliancy the beautiful colors of the rainbow. Surrounding the Falls, and standing low down upon the brink of the precipice, are numerous pine trees, which lend a charm and picturesqueness to the scene, impossible to describe.

Both Falls of the Yellowstone are exceedingly grand and beautiful, but a just idea of their sublimity and immensity can only be attained by a view from the depths of the canon below, or the jutting rocks above.

At a distance of ten miles above the Falls, as we

passed onward toward the lake, we entered a region abounding with boiling springs. The whole expanse, covering thousands of acres, seems to be one vast lava-bed, with numerous vents, in which the water boils continually. Many of these springs are thirty or forty feet in diameter, and in frequent instances have formed craters. Sometimes these craters are of highly colored clay—receiving their tints from the chemical agencies with which the water is in contact; again they are formed of sulphur—nearly pure, and with a velvet-like finish, which is very beautiful; and still again we found them composed of the most delicate crystalizations of alum. A little further on, is a region where the deposits are principally silica, of snowy whiteness; and again, there is a region abounding with cauldrons of boiling mud, which in many places is strongly impregnated with sulphur, emitting a very disagreeable odor. In some instances these latter springs are active volcanoes, casting, at intervals, their murky contents to the height of several feet.

Passing westerly from Yellowstone Lake, we entered upon the wonderful basin of Firehole River, which is one of the most remarkable geyser regions in the world. The tract comprises an area of thirty or forty square miles. Firehole river has its rise in Madison Lake, in the southwestern part of National Park, and is the chief tributary of Madison River. Firehole River is a succession of falls and rapids, all of which are very beautiful. Compared with the geysers of the Firehole Basin, the great geyser of Iceland sinks into insignificance. The geysers spout at intervals of from two to thirty hours. The first

one discovered by the explorers of 1871, threw a column of water, five or six feet in diameter, to the height of 125 feet, and held it there for fifteen or twenty minutes. Other geysers, in this region, throw columns of water twenty-five or even thirty feet in diameter, to the height of two or three hundred feet and some exceed even these. One called the "Bee-Hive" cast a column of water to the height of 219 feet. The "Giantess" throws a column to the height of 250 feet, and these are exceeded in magnitude by hundreds of others in this volcanic region.

The water of the geysers varies in temperature from 150 to 200 degrees, Fahr., and it is strongly charged with the various salts common to volcanic regions.

"A member of the U. S. Exploring Expedition, reporting his observations in this region, says:—

"Brimstone Basin is the name given to a valley on the east side of the lake, which is filled with the ruins of former hot springs. Nothing is now left save the glaring white deposit which extends far up on the mountain's side in deep ravines. These deposits consist in part of sulphur, from which sulphurous odors are still given off, and the water, passing through the beds, acquires a strong taste of alum.

"Steamboat Point is on the northeast shore of the main arm of the lake. We pitch our tents on the bluff, two hundred feet above the water level, on a grassy lawn, which is adorned with grand old spruce trees, whose symmetry and beauty would be an ornament to the finest park in the world. At the extremity of the bluff, there are a number of steam

jets, from which there escape immense volumes of steam, with a continuous noise, resembling that made by a large steamboat, when the escape valve is open. These act, in reality, as the escape valves for the forces far beneath, and even they are not altogether sufficient, for each night, while we stay here, we will experience an earthquake. About a mile from Yellowstone Lake, we find a smaller lake, whose waters are of a greenish-yellow color, and taste strongly of alum. This we call Turbid Lake. Its whole surface is covered with bubbles of escaping gas.

"Leaving here, we enter the valley of Pelican Creek, one of the tributaries of Yellowstone Lake. At the point we enter it, the valley is wide and meadow-like, and the creek winds through it in a serpentine course, its water covered with flocks of wild geese and ducks. So tame are they, that, although we fire repeatedly into their midst, they are not disturbed. Our course is up stream. The ascent is gradual, however; the valley becomes narrower and narrower, until, at last, we reach the head of the stream, and at sunset camp on the shore of Shadow Lake, nearly three thousand feet above Yellowstone Lake. The lake is beautifully situated. Tall pines stand upon its banks like gloomy sentinels clothed in sombre green. The water is perfectly placid."

But the most beautiful expanse of water in this region of wonders, is Mystic Lake, which is about half a mile in length, and a quarter of a mile in width. Lofty wood-crowned hills slope to within a short distance of its grassy banks, while far above



them rise a volcanic snow-capped range of mountains, from the summit of which project jagged peaks and jutting rocks, that afford a foothold for the mountain sheep. A stream flowing from the lake forces its way into a deep basin through ledges of limestone, forming many beautiful cascades. Not far distant from the lake are delightful meadows, studded with little groves of pine, and here herds of antelope graze. On a plateau, a hundred feet higher than Mystic Lake, may be seen through the branches of the pine trees, two smaller lakes, the water of which is of emerald tint; they form a beautiful picture in this silent and tenantless region.

A mountain of obsidian or volcanic glass, it is reported, has recently been discovered near the foot of Beaver Lake. This new wonder consists of columnar cliffs of several hundred feet in altitude, in the immediate vicinity of boiling springs, at the margin of the lake. It is said that the exploring party cut a road through the steep, glassy barrier, which they accomplished by making fires on the glass, then dashing cold water upon it. Large fragments were in this way detached from the solid sides of the mountain and broken by hammers. In the grand canon of the Gibson River, the explorers also found cliffs of yellow, black and banded obsidian, hundreds of feet high. The natural glass of these localities has, it is said, long been used by the Indians for tips of spears and arrow heads.

The only route to the Park, at present known to be convenient of access, is from the settlements in Montana Territory by the way of Fort Ellis, on the Gallatin river to the valley of the Lower Yellow-

stone; thence eastward around the lake, stopping at the hot springs; crossing numerous small tributaries, the most interesting of which is the Upper Yellowstone, and passing from the west side, westerly into the basin of Firehole River.

The mountain scenery in this region is grand and beautiful. The snow-capped peaks of the Wind River Range on the south, loom up with awful sublimity, as though they would pierce the skies. The main divide of the Rocky Mountains on the west, presents a distinct outline, dark and threatening; while the Snowy Mountains on the east, and the Gallatin peaks on the north, are more picturesque and interesting.

From the summit of a high mountain peak south of the beautiful valley of Gallatin River, the Missouri is seen directly in the distance upon the one side, and on the other Jefferson and Madison Rivers, both of which unite with the Gallatin. To the south of our point of observation, we look upon a most rugged, wild and picturesque region, with giant mountains the chief feature in the landscape. Upon the nearer ranges, which are volcanic, snow may be seen. Eastward extend the Snowy Range of the Yellowstone. Emigrant Peak, Mount Delano and Mount Cowan of this range are distinctly visible, as are also many lofty peaks of the Madison Range, which extend to the western horizon, while just below us is the crater of an extinct volcano. The perpendicular wall, on the northern and western sides, is too steep to hold the snow, which lies in deep banks before us, upon which the sun never shines. The height of this peak, known as Mount Blackmore, is ten thousand feet.

Had the Northern Pacific Railroad been completed, it would have furnished tourists and settlers an easy, rapid and convenient mode of access to the wonderful region and the fertile valleys adjacent.

It is certain that but a few years will elapse till the American people will find it an imperative necessity. Settlements are rapidly springing up all along the entire line of the road; the hardy pioneer and frontiersman already appreciate the fact that the mines and fields of Montana and Wyoming are inexhaustible sources of wealth. Starting from Duluth, at the head of Lake Superior, the Northern Pacific Road pursues a westerly direction till it reaches the valley of the Yellowstone, about 150 miles above its confluence with the Missouri; it then follows the course of the Yellowstone, for a distance of 500 miles, till it passes through the Snowy Mountain Range, when it turns abruptly to the northwest, and breaking through a convenient pass in the Rocky Mountains, pursues its way to the Pacific. This grand enterprise will be consummated in the near future.

In the summer of 1879, two miners had a thrilling adventure in the Big Horn Canon, in the Yellowstone region. These men wishing to save two hundred miles travel around the mountains, concluded to make a short cut by going through the canon,—an exploit never before attempted by man. With some tools they had in the mining camp they constructed a frail craft, at the bottom of the canon, having previously taken down a sufficient quantity of red cedar for the purpose. The boat was made twelve feet long and three feet wide, and,

upon trial, was found to carry its cargo of freight and passengers admirably.

All being in readiness, on the morning of July 23d, the men embarked and pushed their boat into the current. The rush of the river, which before starting was almost deafening, became terrible, as the boat started on its passage through this unknown gorge. To go back was utterly impossible; to climb the precipitous solid limestone walls which rose five hundred feet above their heads, where a narrow streak of light shone upon their course, was a visionary idea not to be entertained for a moment; through they must go, trusting to their ability to avoid rocks, and to the strength of their little craft to run the rapids, which they met at every bend of the canon. The loudest halloo was heard as a whisper. Grottoes, caves, and recesses were rapidly passed by those daring explorers. In places, flocks of mountain sheep, startled by the appearance of the curiosity rushing by below them, would run along a narrow ledge of rocks, jump from crag to crag, where footing for man would be impossible, and disappear. The scene was wild, weird beyond description, and can scarcely be imagined.

Evening coming on, they attempted to tie up for the night. They managed to work the boat close to the shore, at the imminent peril of its destruction upon the rocks, and jumped out without injury, but the rope attached to the bow of the boat parted, and in an instant their fragile craft was being whirled rapidly onward by the swift-rushing waters, carrying with it their guns and provisions. The situation was truly appalling. With starvation behind

them, and scarcely a foothold before them, their chances of escape were indeed doubtful. Luckily, they found two logs that had been borne down by the stream, and lodged in an indentation of the rock; these they lashed together with their belts and a portion of their clothing, and again trusting to the river and dangerous rocks, they pushed out into the stream, and were borne along with great rapidity.

- At a distance of two miles from the place of the accident, the boat was found in an eddy of the river—formed by jutting rocks—and by the greatest possible efforts, the men regained it.

On the afternoon of the third day, while wondering how much longer the Big Horn Canon could possibly be, they shot out into the beautiful Big Horn Valley, with Fort C. F. Smith on their right. It was a thrilling experience which they will not repeat to save double the distance around the mountain.



CHAPTER XXI.

Wyoming—Mountains—Rivers—Valleys—Plains—Wild Animals—The Bed of a Former Ocean—Wonderful Natural Curiosities—Ante-deluvian Animals—Gold Discoveries—Cheyenne—Forts—Montana—Climate—Routes to Montana—Natural Divisions of the Territory—River Sources in the Mountains.

The magnificent Territory of Wyoming embraces an area of 98,000 square miles, its length from east to west being 355 miles; its width 276 miles,—as great an area as the whole of New England and the State of Indiana together. On the north is Montana, on the east are Dakota and Nebraska, on the south are Colorado and Utah, and on the west is Idaho and a part of Utah. For healthfulness of climate, diversity and grandeur of scenery and wealth of resources the Territory is unsurpassed.

The southeastern portion is a continuation of the Platte region, and does not differ from that of Nebraska, but the northern, western and central portions are made up of grand and lofty mountain ranges—the sources of rivers, thousands of miles in length, which, after watering a continent, find their way to the Atlantic upon one side and the Pacific on the other. These mountains are portions of the vast range which extend from north to south of the western continent. The most conspicuous is the Wind River Range, which includes Fremont's Peak and Snow's Peak, both more than 13,000 feet in height. Within a short distance of each other are the sources of the great Missouri and Colorado

Rivers. Then there are the Big Horn Mountains, the Sierra Shoshones, a portion of the Black Hills of Dakota, the Wasatch Range, the Sweetwater Mountains and the Black Hills of Wyoming.

The Platte Valley extends far into the central and southern parts of the Territory, comprising an area of 22,000 square miles. The Powder River Valley opens to the north; and other valleys of importance are the Sweetwater, the Big Horn and the valley of Green River. In addition to these, there are very many small valleys, fertile bottom lands and good grazing grounds. "The plains are those of the Platte, Powder, Big Horn, Sweetwater, Green River, Belle Fourche and Cheyenne, and include the lands lying between the bottoms and the foot hills—immense regions, too dry for cultivation without irrigation, but furnishing food for millions of cattle and sheep."

The soil of the Territory is as varied as its surface. Stock feed upon the plains at all seasons. Near the mountains there are barren spots, but more frequently the grasses grow upon the foot hills and the growth is luxuriant in the many thousands of ravines and canons. Dense forests of pine, cedar, fir and hemlock cover the mountains, and the valleys are diversified by groves of cottonwood and other trees.

In Wyoming the hunter may have his choice of game for there may be found in any number buffalo, elk, antelope, deer, grizzly and cinnamon bears, puma, wild cat, lynx and Rocky Mountain sheep, while among the smaller game he may find grouse, partridges, ducks, geese and rabbits. The trapper re-

joices in an abundance of beaver, mink and marten; and the angler becomes enthusiastic over his luck in taking the finest trout, and other choice varieties of the finny tribe.

The geology of Wyoming is especially interesting. The tourist, even if unskilled in science, can readily picture the upheavals that formed the mountains and divided the ocean into lakes. He may trace the gradual subsidence of these oceans, the beaches they made, their action upon limestone and granite, until channels were worn, and the pent-up waters flowed down the valleys, now watered by the diminished streams.

Wyoming is full of natural curiosities. Here are mountains of granite, limestone and sandstone; beautiful parks and mirror lakes; natural bridges; Titanic gateways; balanced rocks; skull rocks and table rocks; and a mockery of art in domes, cathedral spires and frowning battlements, which have no counterparts of proportions in the work of human hands. The mausoleums of extinct animals, which lived thousands of years before man was created, are found here—the remains in such perfection, that not only can the immense mastodon, crocodiles, turtles, etc., be studied in the completeness of every part, but fish have been preserved, even to the smallest scales, and insects without so much as the loss of their delicate antennæ.

From these beds in which the living forms of the past have been preserved, rather than fossilized, science has recently drawn some of its most astonishing deductions as to the ancient fauna, flora and climate of this continent, and more remains to

tempt the curious, and reward the search for truth. Of all these natural curiosities, the Yellowstone Park is perhaps the chief.

The wealth now hidden in the mountains and streams and under the soil of Wyoming will soon be brought to light. Gold exists in every mountain chain of the Territory, and mingles with the sands of almost every stream. It has been found in abundance upon the Sweetwater, and the Big Horn Mountains are believed to conceal more gold than the Black Hills of Dakota. Silver, lead, copper and iron are known to exist in immense deposits. Coal is also found in abundance, and occasionally, to the depth of 25 feet, as at Evanston, on the line of the Union Pacific Railroad. The less valuable precious stones—agate, topaz, jasper, garnet, quartz crystal, and beautiful petrifications, are scattered over the mountainous part of the Territory. Through the southern part of this splendid country, from east to west, extends the line of the Union Pacific Railroad.

Wyoming was organized as a Territory, May 10th, 1869. In all the principal cities and towns, schools and churches are well sustained, and wherever settlements have been made, there are abundant evidences of enterprise, thrift and prosperity.

Cheyenne is the capital and chief city of Wyoming; it is also the county seat of Laramie County, which comprises a territory of more than twenty thousand square miles—somewhat larger than the counties of Eastern States. In 1867, Cheyenne was a very small settlement, but at this date it is a pretty and flourishing city of five or six thousand inhabitants. Its rise and prosperity is due to the

opening of the Union Pacific Railroad. The city is supplied with water from two artificial lakes formed by diverting the waters of Crow Creek into two little valleys in the vicinity.

An important industry of the city is the manufacture of jewelry, from the materials afforded by the western mountains. Other revenues are derived by furnishing supplies to the military posts and Indian agencies, and also from the freighting business. The thousands of miners who go to the Black Hills here obtain their supplies. At an early day Cheyenne will be the terminus of two important railway lines now in contemplation. Near the city is Camp Carlin and Fort Russell.

The line of military defences between the great trans-continental railroad and Montana are the following: Fort Laramie, due north of Cheyenne and about ninety miles distant, is established upon a reservation of fifty-four square miles. It is a place of importance from its position on the road to Montana and the Big Horn and Powder River regions, and is a trading post for trappers and Indians. Fort Fetterman is eighty miles further on—situated on the South side of the Platte. The reservation includes sixty sections of land. Fort Reno, Fort Phil. Kearney, and Fort Smith guard the Powder and Tongue River districts which embrace the best agricultural lands in the State, and offer especial attractions to miners and stockmen. The soil of those regions is fertile, timber is abundant, and irrigation is unnecessary. Within a very few years this favored section of the Territory over which now roam bands of Indians and wild

beasts, will become the thrifty domains of white settlers.

We return to the great empire of the Northwest, the Territory of Montana. It is indeed wonderland, not more for the marvelous beauty of its natural scenery than for its illimitable resources. It is Nature's treasure repository of the continent. As we contemplate its mineral and agricultural wealth, so accessible to man, its healthful climate, the glorious achievements of its enterprising citizens, all is as seemingly unreal and fanciful as a fairy tale, but the facts and figures are before us, and as we realize their depth of meaning, a new wonder possesses the mind—wonder that this vast realm is so sparsely populated—that the tide of immigration has not long ago densely peopled the Territory. There is but one solution of the subject, and that is, the people have not yet fully comprehended the facts that have been published, and the too general supposition that the region is inaccessible, beyond the bounds of civilization, and the journey thither beset with perils innumerable.

A brief resume of facts within my own observation, and the reliable information, furnished me by the accomplished journalist of Helena—whose sparkling journal, the Herald, is invaluable for its fund of intelligence concerning the Territory—will interest the reader, and tend to correct any erroneous impressions that may exist, relative to this rich and attractive region.

Montana is five hundred miles long and three hundred miles wide—comprising an area of 150,000 square miles, and hence larger than all New Eng-

land and New York State together. England, Ireland, Scotland and Wales combined, do not equal the Territory of Montana in size. It embraces all that area between the 45th and 49th parallels of north latitude, and the 104th and 116th meridians of west longitude. Although the latitude is so high, there are portions of the Territory in the same latitude as parts of Wisconsin, Minnesota, Michigan, Oregon, France and Switzerland, and portions in a lower latitude than Great Britain, Belgium, Prussia, Norway and Sweden.

Although the Territory, like that of Dakota, which is still larger, has a great range of climate, it is everywhere healthful and delightful. The temperature is generally mild and even, and although severe cold weather is sometimes experienced, it is never long continued. The rainfall has increased during the past few years, and the snow upon the mountains lies deep, but the proportion of stormy days is small. The glorious sunshine and pure air for the greater part of the year, is eminently conducive to health.

The Territory is diversified with mountains—ranges, spurs and peaks. The head waters of the Missouri and the Columbia Rivers lie within its borders, and it is well watered by these, and by the Yellowstone, Milk, Marias, Musselshell, Tongue, Big Horn and Powder Rivers, and their tributaries. In the valleys of the western, central and southern portions of the Territory, the soil is fertile; upon the table lands it requires irrigation. Of the eastern portion of the State, I shall speak at greater length. The Territory is well timbered throughout, the mountains be-

ing covered with a dense growth of pine, fir and spruce, some of which attain very large size.

The principal valleys are the Yellowstone, Gallatin, Madison, Jefferson, Muscleshell, Judith Basin, Deer Lodge, Missouri, Prickly Pear, Bitter Root, Jocko, Big Hole, Hellgate, Blackfoot, Dearborn, Teton, Marias, Milk and Sun Rivers.

"Montana boasts of the finest river and valley system in the world," says Strahorn, in his work, "To the Rockies and Beyond," "having a dozen rivers as large and beautiful as the Mohawk or Juniata—three of which are navigable. All the streams are full of trout and other fish; elk, deer, antelope, moose, bear, mountain sheep, and many kinds of small game abound. Numerous hot springs and a mild, invigorating atmosphere are among the attractions for health seekers. The value of the productions in 1878, of mines, farms, pasture lands, etc., was sixteen million dollars, or \$450 for every man, woman and child in the Territory." Churches, schools, libraries and good daily and weekly newspapers are well sustained.

More than forty millions acres of pastoral and sixteen millions acres of agricultural lands are comprised in the vast domain, and *five-sixths* of all this valuable Territory is yet unoccupied, and yet no region under our flag offers greater inducements to immigration. The valley and bench lands have a less altitude than 3,000 feet, while the average elevation of Wyoming is 6,400 feet, Nevada and New Mexico 5,600 feet.

This Territory may be reached by immigration by steamboat to Fort Benton, on the Missouri River,

and by steamboat up the Yellowstone; or by the Union Pacific Railroad from Omaha, and the Utah and Northern from Ogden, and overland coaches or private conveyances. The latter railroad has its terminus at Beaver Canon, 200 miles south of Helena.

The main range of the Rocky Mountains enters Montana from the North, between the 113th and 114th degrees of longitude, bearing southerly to about half-way between the 45th and 46th parallels of latitude. From this point, it turns abruptly to the West, about two degrees of longitude, where it intersects the Bitter Root Range. The western line of the Territory, from the intersection follows the crest of the latter mountains north to the Cœur d'Alene Range, and from these latter mountains to the British Possessions. This constitutes the "West side" of Montana, or that part drained by Clark's Fork of the Columbia River into the Pacific Ocean. It embraces an area of about three-and-a-half degrees of longitude in length, by three parallels of latitude in breadth—about one-fourth the area of the Territory. The other three-fourths is drained by the great Missouri into the Atlantic Ocean.

Unlike other large rivers of the world, the Amazon and the Nile, that have their sources and flow through great marshes, swamps and lakes, the great rivers of Montana are fed by innumerable creeks, gulches, ravines and rivulets, having their source near the summit of her mountain ranges, flowing with a rapid current to the main streams, filling, but never overflowing their banks. There is comparatively no marshy or swampy land in Montana. All these little streams have cut their way through the moun-

tains, leaving great divides on either side, some of them as high or higher than the main range. The mountains rise from five to ten thousand feet above sea level. At this altitude all the moisture received from the clouds for six months of the year is in the form of snow. It keeps falling at intervals all that time, and there is no perceptible diminution by evaporation or otherwise.

During the time the snow falls, or soon after, the wind deposits it in gullies and low places, on the opposite side of the mountain. This is invariably repeated at every snow fall. The winds of winter are from the west and northwest, so that all the snow, falling upon the bare and exposed places on the summit or western slope of the mountains, is picked up by these prevailing winds and deposited on the opposite side. Thus these low places not only retain the snow that naturally falls there, but the snow that, but for the winds, would have covered the ground for many miles around. In this way immense snow-drifts are formed at the head of every one of the thousands of streams of every size, rising in the mountains of Montana, and in every low place or depression in the sides of the tens of thousands of miles of mountain ranges that form their banks. These snow-drifts settle and pack, and by spring they become almost as solid and firm as ice. They vary in depth from five to twenty, and in some instances, thirty feet.

Here, on every mountain side, hanging far above the streams, are great reservoirs of congealed water, held securely and firmly by the unvarying temperature of winter, until gentle spring comes and un-

locks the rivers from their icy fastenings and warms the alluvial soil of their great valleys, and the bright rays of the sun slowly and surely penetrate the crystal mass, sending the water trickling down the mountain side, filling the streams with that pure and sparkling liquid.

At the altitude of these banks of compact snow, the nights are always cool, and hence it is, that as soon as the sun sinks beyond the mountains in the west, the melting process ceases, and the water is held in check during the night, to be let loose again only on the return of the sun's rays. This wise provision of nature, in the gradual melting of the snow-banks, prolongs the water supply and prevents the inundation of the States bordering on the lower rivers. If the snow-fall was evenly spread over the surface of the whole country, much more of it would be taken up by evaporation, and it would melt and pass off rapidly, leaving a low stage of water in the rivers during a great part of the season.

The snow-fall of Montana is much less than in the Territories to the south. It is her more extensive mountain ranges, and the drifting and packing process of the snow that falls, that makes it possible for her to give birth to two of the largest rivers on the continent.

The sources of the two great drain rivers of Montana are not clearly understood, even in our own country, owing, doubtless, to the fact that these rivers do not retain their names to their true sources. By their true source we mean the stream that conducts the most westerly drainage to the Atlantic and the most easterly drainage to the Pacific.



When Lewis and Clark named the three forks of the Missouri, they were in doubt as to which was the true source of that great river. When, however, they reached the confluence of the Beaverhead and Wisdom or Big Hole Rivers, and had ascended the former as far as they could with their boats, they concluded that it was the true source of the great Missouri. Some geographers claim the Madison to be the true source; others, that the Wisdom or Big Hole is the stream entitled to that distinction. Appleton's Cyclopedia says the Wisdom River is thought by many to be the true source, and that it rises within a mile of the headwaters of Clark's Fork of the Columbia. Instead of one mile the distance is 125 miles.

Fires not unfrequently occur in the forests bordering the large rivers, as well as upon the extensive plains in autumn when the grass has become dry, not only proving destructive to valuable property, but to human life. The following thrilling incident which occurred in the autumn of 1879, illustrates the rapidity with which the flames extend when once kindled. Col. Leon and a Mr. Perry, lessees of Canon ferry, at the head of the Magpie River, started down the mountain road, in a vehicle drawn by a pair of horses. The wind swept violently from summit to base, and with it floated great clouds of smoke, a party of prospectors having the day before allowed their camp-fires to extend to the grass in the vicinity. About three o'clock in the afternoon, Leon and his companion realized that the whole vast incline back of them was in flames, and that the fire was sweeping down the mountain with great rapidity.

With a crooked, rocky, and in some places unbroken road before them, the travelers became alarmed for their safety. What was to be done, must be done with the utmost dispatch. Their only hope lay in outstripping the advancing flames. Leon put whip to the horses and the animals dashed along the verge of the dizzy precipices at breakneck speed. The booming of falling timber, and the roar and crackling of the flames was frightful in the extreme, and rose above the voices of the men, while the smoke was blinding and at times concealed the rugged road. Hot blasts of air had nearly exhausted the horses, when to add to the horror of the position, it was found on making a sharp turn in the road, that it had been choked up by tumbling rocks and the debris of pine trees that had fallen from above. These obstructions, the men were obliged to remove, a work which required many minutes, the flames the meantime pursuing them with fury. When they again started, trees were falling all about them, the atmosphere was filled with smoke and the fumes of burning pitch. A short run, at the utmost speed of the horses, for a quarter of a mile, brought the travelers to a clearing upon the mountain side and they escaped.

CHAPTER XXII.

Eastern Montana—A Vast Unoccupied Region—The Western Wilds in Earlier Days—Appearance of the Country—Productions—Stock Raising—Attractions for the Tourist—Hunting Grounds—A Letter by Arapooish, a Crow Chief.



In speaking of Montana, we generally ignore entirely the largest part. Referring to its mines, its agricultural and pastoral settlements, we think only of the western third, lying on both sides of the main range of the Rocky Mountains, and the numerous spurs extending east and west of the great divide; but a glance at the map shows us that the present settlements hardly extend east of the 111th meridian, while the eastern boundary of Montana lies seven degrees further east.

Here is an immense scope of country, covering seven degrees of longitude (104—111 W.), and four degrees of latitude (45—49 N.), or 350 miles east and west by 250 miles north and south, which is, as yet, hardly touched by civilization. A few stray cow-boys or sheep-herders, may be found along its western border, and a thin line of scattered settlements cuts through it along the northern bank of the Yellowstone, but hardly an impression has yet been made on its 90,000 square miles.

Eastern Montana is divided into three belts of nearly equal size by its two principal rivers, the Missouri and the Yellowstone. These two unite on its eastern border; and they have served in the past as the highways by which the only access to the country was practicable. If we except the early French travelers who reached the Rocky Mountains within Montana, and probably traversed a considerable portion of the country along their eastern base, the first real explorers of these Western wilds were Lewis and Clarke, with whose wonderful exploits we are all familiar. They ascended the Missouri, and dividing their party, one division descended the Yellowstone, thus showing the navigability of these two streams for mackinaws and batteaux. The knowledge thus gained was soon taken advantage of by the adventurous fur-traders and trappers, ever on the lookout for virgin ground, to which they might extend their operations and reap a rich harvest before the arrival of keen competitors. Although a fascinating theme, I cannot dwell on these early times, seemingly so far off, because nothing like them can now be found, but really only half a century removed from the present day, when scores of steamboats are navigating these two rivers, and it is only a matter of a few more years before the iron rails will be laid along their banks and across their waters.

The pages which shall truly tell the history of those days will be as full of romance as any in the history of our country. Many a night I have sat among the buckskin-clad hunters and trappers around the camp fires and listened to the tales of deeds, rivalling those of Daniel Boone; and the



shores of the Missouri are truly as bloody ground as the woods and prairies of Kentucky.

Those of our readers who have come up that river must have had pointed out to them many a now deserted cabin, many a brushy ravine or narrow "coolie," as scenes of gallant fights or bloody massacre. They must have been told how eight young men from St. Louis, were brought up on a steamboat, and selected a place for a wood yard, built their cabin, and were found by the same steamboat on its return from Benton, eight blackened corpses among the smouldering house logs; they had been too confiding; allowed the Indians to come up to them, and were killed with their own weapons. Or they have landed at the old trading post, at the mouth of the Muscleshell, and been told of the one white woman, within hundreds of miles, who still lived, while her scalp adorned the lodge of a Sioux brave. Or they were shown the coolie in which thirty brave wood-choppers and wolfers attacked a hundred Indians, fighting them the whole day, and at last compelling them to run for their lives, leaving thirty-two good Indians behind them, and only two bucks getting away without a wound, while five hundred other Indians were yelling and shooting in the woods, a mile off, too cowardly to come to the assistance of their comrades.

Only those who have lived at Muscleshell, or a similar place, can realize what the life of an early hunter or trapper was: constant danger, constant apprehension. One living in a country surrounded by hostile Indians, feels never at perfect ease. No matter what his occupation, his rifle is never beyond

his reach. He never goes outside of the door of his cabin or lodge without being armed *cap a pie*. His eye is constantly watching for signs of his enemies. He scans every bush, rock or ravine, as he approaches them, for fear an Indian may be lurking behind them. He camps in places where unobserved approach is difficult. He puts out his camp-fire at dark, let the weather be ever so cold, lest he should become the mark for the rifle-bullet of a skulking savage. His nerves are strung to the highest pitch: the slightest noise awakes him; and yet, in spite of all this, there is an indescribable something about this wild life, this untrammelled freedom of the limitless prairies, which has a charm for even educated men, and whoever has once tried it, looks always back to that period of his life as having given him a freshness of enjoyment and feeling, which he has never since experienced.

On the west and south, Eastern Montana is bounded by mountains, and a few detached masses are scattered through its northwestern part. These mountains are well timbered with pine and fir, and from them issue numerous streams, abundantly watering the adjacent country, which is covered with a magnificent growth of bunch grass, making the finest imaginable stock range, except during the deep snows of winter, when it becomes necessary to drive the stock some distance from the high mountains, where the snow rarely falls, to any great depth.

After leaving the mountains some fifteen or twenty miles, the country begins to change in character. The vegetation loses its luxuriant fresh-



MONTANA LAKE BY MOONLIGHT.

ness, the rank growth of grass and tall weeds found along the base of the mountains, settles down into an open growth of bunch grass, ten to fifteen inches tall, with the habit of steppe, vegetation of mountains the world over, growing in tufts, leaving the ground visible between.

Except during May and June, the grass looks yellow and withered, apparently without life or strength. Few or no streams rise in these plains; some springs trickle out of the hillsides here and there, but few of them form permanent brooks; they are generally absorbed by the thirsty soil after running a few hundred yards. The permanent streams run in comparatively narrow valleys, the grassy, rolling table lands rising in easy swells on either side, except where the underlying sandstone appears, and forms a steep bluff against the river valley. Timber is scarce.

Along the streams is a narrow fringe of cottonwood and willows, and where the prairie assumes a more broken character, and the bed-rock crops out, we find generally a scanty growth of fir, pine and cedar. Along the large rivers, such as the Missouri, Yellowstone, Powder and Tongue, grow large groves of immense cottonwood trees, interspersed, east of the 106th meridian, with ash, box-elder and oak. Their valleys are several miles wide, with a rich, black soil, but immediately back of these valleys rise singular "bad-land" bluffs, five or six hundred feet high, giving a very forbidding aspect to the country, to any one ascending these streams. The "bad-lands" extend back only a few miles, however. Climbing up their loose, crumbling sides,

almost without vegetation of any kind, it appears that they form only the escarpment of the table land. The wash has been so great that all the surface soil has been worn away, exposing a sterile sub-soil seemingly incapable of sustaining any kind of vegetation. The summit of the table land is again of the nature of the country already described; a rolling, grassy plain.

This apparently dead and sere grass is the richest of pastures. This part of Montana will never form a thickly-settled farming country. The river valleys will all be cultivated, and sufficient grain and vegetables will be raised to supply the home demand. "In the scattered settlements of the Yellowstone," says a journalist of Helena, "actual experience has shown that good crops, of all kinds, may be raised without irrigation, and as the growing season is much longer than in the mountain valleys, we will probably, in a few years, draw our supplies of tender vegetables and fruits from the Yellowstone, as Missoula will supply Deer Lodge and the Western Slope." Grapes and plums are growing wild in abundance throughout the Crow reserve, and extensive orchards are now being planted along the north bank of the Yellowstone.

Mineral deposits are found everywhere in the mountains, and as soon as the Indian question becomes sufficiently settled to make thorough prospecting possible in the Big Horn Mountains, there is every probability that rich discoveries of the precious metals will be made. Indications of gold, silver and copper, have been found in many places, but as long as the discoverer would not be per-

mitted to profit by his discoveries, there are, of course, few inducements for the prospector. Coal-bearing strata abound everywhere. Along the Missouri, the Yellowstone, the Powder River—in short, wherever a large stream has cut down, exposing the strata—coal seams may be seen; but as there has not hitherto been any use for coal, the mines are, of course, undeveloped.

It is as a stock-raising country, however, that Eastern Montana is destined to take very high rank. Only within a few years has it been possible for stockmen to take their herds east of the Belt range. It is but three years since Indians raided every summer, up to the very outskirts of Bozeman. Such was the condition of the country at the time of our visit. No one then dared to travel ten miles east of Helena without being armed to the teeth, and every year people were killed in the immediate vicinity of the Capital. Now a daily line of coaches runs undisturbed, the whole length of the Yellowstone valley, and people travel alone and unarmed from here to Miles City, eating their dinners every day, and sleeping every night in a comfortable farmhouse. Already, however, is the nearest accessible country, filling up rapidly. Stockmen are pushing their way down the Muscleshell and the Yellowstone, and, in the north, up the Highwoods and along the Teton and the Marias. Eastern capitalists are waking up to the fact that the bunch grass of the plains holds a surer fortune than the uncertain bonanzas, and companies are forming to raise cattle and sheep on a large scale. It may be confidently predicted that in five years from to-day, one

may traverse this plains country in any direction, from the Canon of the Big Horn to the alkaline bottoms along Milk river, or from Bozeman to Bismarck, with herds of cattle and sheep constantly in sight. As a grass country, all this immense tract is far superior to the lands lying between the Union and Kansas Pacific Railroads, and Montana cattle are to-day favorably known in Eastern markets, as being of equal grade and in as good condition as those coming from Colorado, Nebraska or Wyoming. Only one thing can prevent, or at least retard, the prosperity of Montana in the near future. That is unwise legislation by Congress. Signs are abundant that great land-grabbing schemes are afoot. The present cry is that while our land system did very well in the agricultural States, it is entirely unsuited to the grazing country of the West. This is undoubtedly the case, if it is the best policy of the government, to dispose of these lands. They cannot be sold in tracts of 160 acres, nor of one square mile. If they are to be sold at all, it must be in lots of dozens or hundreds of square miles, and the larger the lots are made the easier it will be to sell them. But the result of this would be highly detrimental to the Western Territories. The sum for which all this land could be sold would be very small, a few cents an acre, barely covering the cost of parceling it out, and ultimately a few hundreds of wealthy men, or companies, would own scores of thousands of square miles. No; let the agricultural land along the water courses be surveyed and disposed of in small lots, as at present, under the homestead and pre-emption laws; but revoke the

desert-land act, at least for Montana, and leave the grazing land as public domain, open to the widow's one lamb, as well as to the wealthy man's thousands of cattle. In that way it will take but a few years before all the land will be utilized. Every available acre will be cultivated, and thousands will find comfortable homes where we will find only a few rude cow-boys, or half-Indianised shepherds, making fortunes for Eastern capitalists, if the land is thrown upon the market in large tracts.

For tourists Eastern Montana has considerable attractions. The strange "bad lands" along the principal rivers are a unique feature in the landscape, while the scenery along the Upper Missouri is grand beyond description. The Big Horn Mountains on the southern border are probably the most picturesque range in the United States, and the whole region affords splendid hunting and fishing. Here is the last stronghold of the buffalo. These animals cannot now be found in such numbers as ten years ago, when the tourist could travel from Muscleshell to Milk River, 75 miles, through an open rolling country, without ever being out of rifle shot of the buffalo. They covered the plains as far as the eye could reach, and the grass was cropped as closely as if sheep had been pasturing there for months. But as long as any buffalo herd is in existence, it will be found on the open prairies along Milk River, and when they are completely exterminated on the plains, the last stragglers will probably seek a refuge among the almost inaccessible crags of the Big Horn Mountains. Antelope abound everywhere, while large herds of elk are found throughout

the western part. They were so abundant along the Yellowstone in former times, that the Indians named this stream Elk River. Black and white tail deer fairly swarm in those places, where they have not been hunted too much, and all the mountain streams are alive with beaver and otter. If the hunter wishes a spice of danger in the chase, he will not have to seek long before finding a grizzly bear or a mountain lion.

Arapooish, a Crow chief, in a letter to the well-known fur trader, Robert Campbell, says:

"The Crow country is a good country. The Great Spirit has put it exactly in the right place; while you are in it, you fare well; when ever you go out of it, which ever way you travel, you fare worse. If you go to the south, you have to wander over great, barren plains; the water is warm and bad, and you meet the fever and ague. To the north it is cold; the winters are long and bitter, with no grass; you cannot keep horses there, but must travel with dogs. On the Columbia, they are poor and dirty, paddle about in canoes and eat fish. Their teeth are worn out, they are always taking fishbones out of their mouths. To the east they live well, but they drink the muddy water of the Missouri. A Crow's dog would not drink such water. About the forks of the Missouri is a fine country; good water, good grass, plenty of buffalo. In summer it is almost as good as the Crow country, but in winter it is cold; the grass is gone, and there is no salt weed for the horses. The Crow country is exactly in the right place. It has snowy mountains and sunny plains; all kinds of climates, and good

things for every season. When the summer heats scorch the prairies, you can draw up under the mountains, where the air is sweet and cool, the grass fresh, and the bright streams come tumbling out of the snow banks. There you can hunt the elk, the deer and the antelope, when their skins are fit for dressing; there you will find plenty of white bear and mountain sheep.

"In the autumn, when your horses are fat and strong from the mountain pastures, you can go down into the plains and hunt buffalo, or trap beaver on the streams. And when winter comes on, you can take shelter in the woody bottoms along the rivers; there you will find buffalo meat for yourselves, and cottonwood bark for your horses. Or you may winter in the Wind River Valley, where there is salt weed in abundance. The Crow Country is exactly in the right place. Everything good is to be found there. There is no country like the Crow Country."

And Arapooish was about right. His country is a good one, and unless the Crows learn to make a better use of it than at present, they must soon yield it to those who will appreciate it for something besides its game. It is almost the last untrodden wilderness left in the United States; but even that

being invaded by advancing civilization, and when we turn to the map of America, ten years hence, names of towns, villages and settlements will dot it so closely, that nowhere, throughout the Great Northwest, will the map-maker find a vacant spot, where he can write the oft-repeated words—"Great American Desert."

CHAPTER XXIII.

Stock Raising—Mineral Resources of Montana—The First Mining Excitement—A Reminiscence—Road Agents—Famous Gold and Silver Mines—Treasure Repositories of this Country.

It is fortunate for Montana, that immense coal-beds underlie portions of the Territory, for coal will soon have to supply the place of wood, for fuel, as the forests are disappearing, under the enormous consumption of timber, by the towns, mines and mills. Helena, alone, consumes 30,000 cords of wood, annually, to say nothing of the requirements of the lumber trade.

In the vicinity of the capital, there is a coal-mine, now yielding immense quantities of bituminous coal, and mines of iron, tin and copper, have also been opened.

The certainty of results has rendered stock-raising a favorite pursuit in Montana. Young men and many miners, who manage to accumulate a few hundred dollars, find investments in cattle and sheep very profitable. They place their stock in charge of ranchmen and give themselves no further trouble or care about the matter. Before they are aware of it, they become rich by the increase and value of their herds.

There are millions of acres in the foot-hills, which will supply food for millions of cattle, for centuries, but are good for nothing else. The pursuit of agriculture will continue to be the leading industry of Montana.



Each declivity of the mountains, has a climate peculiar to itself. The west side is favored with dews and rains. Frost does not visit it as early as the east side. Some crops mature better than in the eastern valleys, but in the production of the great staples, there is but little difference on either side of the main range. The average yield of wheat is forty bushels to the acre. Agriculture is a different science in Montana from what it is in the States. The ranchmen can tell exactly what is needful to insure large crops, when and how to irrigate, when to plant and when to glean. The Territory has twenty-three millions acres of agricultural and sixty millions acres of grazing land. The entire agricultural population of Montana, at present, will not exceed eight thousand. Immigration, alone, is needed for the full development of all the elements of prosperity. The entire population of the Territory, base confident hopes upon the early completion of the great Northern Pacific Road. There is a feeling, everywhere, that Montana is soon to be brought into near neighborhood with the rest of the Union, and that her unequalled resources, will be appreciated by the world.

The manufacture of woolen goods will, no doubt, become a great industry in the Territory. Water power is abundant, and the wool is at hand; it is, also, reasonable to predict that, at no distant day, Montana will compete with other localities in the manufacture of shot, white lead, and other heavy articles largely used, for the production of which the crude material abounds in the Territory in quantities sufficient to supply the whole world.

The U. S. Surveyor-General, for Montana, says, of the mineral wealth:

"No reliable estimate can be made of the value of the vast mineral resources of Montana. The richest placer-mining ground in the comparatively settled portions of the Territory, has been worked out, but new diggings are constantly being discovered, and there are immense areas of placer ground which will pay a handsome profit whenever labor can be procured at from \$1.50 to \$2.00 per diem. Quartz mining is still in its infancy, and it is only within the last year that sufficient developments have been made at several of the most prominent mining camps—notably, Butte and Philipsburg—to prove the permanence and value of the ore deposits. Considering her isolated condition and the great expense of the reduction of ores and transportation, Montana's product of precious metals has been very large. In the near future it will be greatly increased, and it is not an extravagant prediction to say that within ten years it will equal that of Nevada."

During the year 1879, quartz mining in gold was unusually active; a large number of new and valuable leads were discovered, and many new mills and arastras were erected. Rich discoveries have stimulated old prospectors to new efforts, and new "finds" are constantly reported. Present indications omen a rapid growth of the quartz mining interests. Neither prospecting nor development of mines has been thus far prosecuted with the thoroughness characteristic of Nevada, Colorado or Black Hills operators, and yet it is true that the

main range of the Rocky Mountains has here, as in other parts of America, rich lands of gold-bearing quartz. The Semple district, near Helena, immediately upon the summit or divide of these mountains, embraces a large tract of country, in which the most remarkable veins of quartz have been discovered within a year or two. This district shows the greatest progress of any in the Territory. Silver quartz mining is now attracting special attention. The great eagerness for gold, in times past, led to a neglect of silver mining, but recent efforts in this department have been prolific of grand results. At the mining camp, Butte, the greatest activity prevails. Here, marvelously rich mines are located, and producing immense quantities of silver bullion. Philipsburg and Glendale are opening up finely, and the present rich prospects warrant great expectations of large returns from these places. In Jefferson County, exceedingly rich leads have been discovered. The poorer and baser silver ores have been utilized by the erection of smelters in Butte and Wickes, in Jefferson County. These ores formerly had little value, owing to the high rates of transportation.

A second "Leadville" and a second "Black Hills" gold mine, within an hour's ride of Helena, are reported. The mines of Summit Valley district bid fair to rank among the best in the land. It is estimated that there are already 200 paying mines developed in the camp.

The largest single nugget of gold discovered in Montana in 1879, weighed 47.80 ounces, with a fineness of 957, free from quartz or dirt, a solid mass of

gold, having a value of \$947.77. Many nuggets varying in weight from a half ounce to 28 ounces, were also found during that year.

The first mining excitement in Montana, began in 1863, with the discovery of gold in Alder Gulch, upon which Virginia City is situated. A party of prospectors from Bannock City, had been to the Yellowstone River and Big Horn Mountains, where they met with hostile Indians, who finally drove them back. The party divided, some going South, toward Salt Lake City, and the others returning to Bannock. On reaching Alder Creek, the latter stopped for dinner, and while the meal was in preparation, one of the number panned out a little of the gravel. The first panful yielded thirty cents, and subsequent ones \$2. As soon as the discovery became known, there was an immediate stampede to Alder Gulch from all parts of the Territory, and a little later, from all parts of the country. At first the product was from \$100 to \$200 a day, for each man, and in the first five years after its discovery, Alder Gulch and its tributaries, yielded on an average, *eight million dollars* a year. The total product to the close of 1876, was more than seventy millions. In 1879 it was \$600,000. This Gulch was the richest ever discovered in the world.

The most noted placers in those days were Last Chance, where Helena now stands, "Confederate," "Silver Bow," "Ophir," and "German" gulches, "Elk Creek," "Bear," "Lincoln," "Nelson" and "Highland" gulches, and "New York," "Cave" and "Montana Bar," and numerous other places as far west as Cedar Creek, in the Cœur d' Alene Moun-

tains. In the fall of 1866, a four mule team hauled to Fort Benton, for transportation down the Missouri River, *two and one-half tons of gold*, worth one and a-half million dollars, nearly all of which was taken from Montana Bar—a piece of ground only a few acres in extent—during that summer. There has been altogether shipped from Montana, at least one hundred and fifty million dollars in gold dust.

The best paying mines at present are the “Penobscot,” “Blue Bird,” “Belmont,” “Hickey,” “Gloster” “Piegan,” “Whippoorwill,” and extensions of the “Snow-Drift” near Helena, “Bonanza Chief,” eight miles from Helena, and others all over the Territory from the great “Cable” lode on the west, to the “Iron Rod” and other rich mines in the Trapper and Bryant district on the South. There are greater bonanza kings among the Silver men, than among the gold gentry of Montana. The “Lexington,” and the “Alice” are very rich mines. There are a hundred silver leads at Butte—the Silver City of Montana.

In earlier times we heard and read a good deal concerning the “Road Agents,” an organized band of murderers and robbers, who infested the mountain passes, and way-laid the miner, as he sought a market for his hard-earned nuggets, or a place for obtaining supplies. Many an adventure and encounter with these outlaws has been reported. Many a time have they brought the stage coach to a halt, and robbed it of its treasure, and the passengers of their money and valuables. Occasionally they “caught a Tartar” and paid for their termirity

and crime with their lives, but they were too generally successful with private individuals. Later, treasure was transported under the protection of a military guard, but the system of robbery and murder set at defiance the officers of justice; till at length an organized committee of safety, known as the Vigilants, took the matter under consideration and made short work with the outlaws whenever captured. A strong rope and resolute men, without a single citation from Blackstone, or other authority, suppressed the murderous practice very speedily. A strong rope, a stout limb and strong arms proved most effectual. Helm, Gallagher, Parish, Lyon, Stinson, and a few others, were summarily hung, and the Road Agency being deemed by those engaged in it, quite too perilous an undertaking, the rascals fled the country.

There are fluvial or fluviatile silver mines—deposits by water or washings of rivers; glacial silver mines—deposited by glaciers; and silver deposits from other causes. True mountain-fissure silver mines were lifted when the mountain chain in which they occur, was lifted, by a force, deep-seated in the earth's molten central body, and so were formed, with the aid of concurring and succeeding events; the veins, necessarily reaching back to the then surface of that molten body, and hence, may be regarded as inexhaustible.

Silver mining is not an industry originating in modern times. It reaches as far into antiquity, at least, as written history. Silver was used largely, in Abraham's time, in the days of Moses and Solomon, in all Jewish time, and among the ancient Ro-

mans, Greeks and Egyptians. There were silver coins 895 years B. C. The mines of Spain yielded wealth to almost every nation of antiquity. The Carthagenians employed 40,000 men in these mines. and the Romans employed more than half that number in the same work. A distinguished German family took out over three millions pounds. Hannibal took, from one mine, half a million a year. Cato, as much from several mines, and Helvetius twice as much. It is stated by Pliny, that Cyrus obtained, by his Asiatic conquests, an amount equal to 7,720,000,000 pounds. Vast amounts were obtained as tribute. Herodotus says the nations subdued by the Persians, except the Indies and Antioch, paid a yearly tribute, in silver, of about three millions pounds. For fifty years after the second Punic war, the conquered city paid an annual tribute of nine thousand pounds of silver. Rome contained immense quantities of this precious metal.

As early as the twelfth century, silver mining began in various parts of Europe, and the mines then worked have been yielding ever since. The Saxon Kings were for centuries, the richest monarchs of the world, and, now, in their vaults, are immense amounts of silver.

Pliny states that in his time, silver mines in Spain were penetrated a mile and a-half. One mine in Hanover is worked, to the depth of 2,600 feet.

All readers are aware of the great wealth of South America, in silver and gold, when the new world was discovered, and the extent to which the Spaniards and others plundered those countries. According to Prescott, Prince Atahualpa, made

prisoner, gathered, to pay for his liberty, the value of three and a-half million pounds of gold, and 51,610 marks, or about 25,805 pounds of silver. Their temples and noble palaces were lavishly ornamented with articles of these metals. Three beams of silver, each twenty feet long, one foot broad, and two or three inches thick, intended for a country seat in process of construction, were found by the soldiers of Pizarro. One of their great silver mines is the "Pasco." From the year 1781 to 1827 the Pasco works smelted 4,967,710 pounds, troy, of silver. The value yielded in 1851, was about 400,000 pounds sterling. Both mining and reducing has there always been done in the most primitive and wasteful manner. In 1852, not less than 4,165 of their valuable mines were idle, and only 66 in actual operation. Notwithstanding the negligence, and primitive and wasteful modes of mining, by the people of South America, the silver mines in Bolivia and Peru yielded, from the period of their discovery to the year 1845, a quantity equal to 155,839,180 pounds. The grand "Potosi" of Bolivia was discovered in 1545, since then it has given to the world two hundred and forty millions pounds of silver. In Chili, not less than 1,750,000 pounds of silver were mined, between 1846 and 1853.

Attention began to be directed to the silver mines of Mexico, about as early as to those in South America. The wealth of the Montezumas is generally known. In the early period of the history of Mexican mining, according to the estimate of Baron Von Humboldt, the mines of that country produced about half a million pounds per annum. Dur-

ing the 18th century, says Lamborn, the production gradually rose to 4,600,000 pounds per annum. This yearly sum decreased during the war of Independence, but within the last ten years, it appears to have been higher than ever before, having, according to the most reliable accounts, reached five millions pounds sterling, per annum. Humboldt's *Essai Politique*, states that the mines of Mexico, of only a few central spots, yielded not less than \$2,027,952,000, between the date of the conquest and 1803. and yet, mining and reducing have always been as crude in Mexico as in South America, and the almost perpetual condition of war, has, of course, utterly prevented mining operations much of the time.

The statistics of silver mining in Mexico and South America, notwithstanding the primitive and wasteful methods of work, and the negligence of miners, are especially interesting and instructive to the people of the United States, since the silver mines of the Andes and of the Rocky Mountains, including the Cordilleras of Mexico, are all of the same great chain, and were formed by the same grand upheaval.

In the United States, the precious metals, as the baser metals and coal, are largely concentrated, under many circumstances that favor mining, beyond the experience of any other country. In the light of history, as well as the teachings of geology, these silver fissure mines are seen to be practically inexhaustible—at least for many centuries. The precious metal products of the West are not much less than two thousand millions of dollars. It is stated

that the Pacific coast of North and South America, including Mexico and the Rocky Mountains, have given to the world one-half of all the gold and silver in it, and an amount equal to all the gold and silver coin in the world, excepting China and India, and yet a great deal has been lost by imperfect reduction, and much has not entered into general statistics. The yield of the Pacific slope of this country, was, in 1872, \$70,236,914; in 1873, \$80,287,436, and in 1874, \$100,000,000. The increase has been mainly of silver, and the whole, to 1875, was \$1,681,386,186.

Colorado—though her silver mines were first discovered in 1865, and only at a single spot, and the mining area expanding ever since, is yet very small, and for several years great difficulties were encountered—sent out to the world in less than ten years \$53,217,603—not estimating the large part of the product sent for reduction to other countries and States and that part taken away by private hands, or which has entered into local properties and built up local fortunes—some of which have been immense.

Silver mining began in Utah, in 1870, and yet her silver product in 1874 was over seven millions of dollars.

In 1874 the mines of California gave to the world seventy-two millions of dollars of gold and silver.

Over the vast areal extent of the mountains, most mines are, of course, distant from road and other facilities; the veins do not everywhere reach to, or even near, the surface, and they do not all, nor does the same vein its entire length, begin the rich ore at uniform depth; it follows that the cost and time

required to reach ore, are not everywhere the same. But experience shows that whenever true silver, Rocky Mountain veins, are penetrated to proper depth—some very great—the rich ores are reached, and, in the main, increase in richness and quantity in the ratio of the progress downward. Every year adds proofs of the United States Commissioner's statement—Vol. 1872—that "mining the precious metals is now not only more profitable, but it is also more safe than any other of the leading industries," and in Vol. 1873—that "the treasures of these Territories are not exhausted,—on the contrary, they have hardly been discovered."

As already observed, geology teaches that silver of the fissure mines could have come only from the molten centre, and that the fissures were opened by tension below, and that, therefore, the veins reach for miles of depth—deeper than man can ever go.

No industry is more legitimate, profitable or safe, than that of precious metal mining in this country. From antiquity to the present time, it has been regarded, by intelligent people, as at least among the most legitimate industries. The great mining schools of Europe show that it is so regarded there. These rank among the best institutions of learning. In Austria, old miners are pensioned by the government. The same views, concerning the legitimacy of the business in the West, are entertained, certainly, by those who are informed concerning it. There is not, never was, and never will be, any gold or silver of any considerable amount, not obtained by mining, and that the world demands these precious metals, and in pretty large quantities, too, we shall see.

We send gold and silver out in every direction, annually, to China, over seven millions of dollars, to Japan, ten millions, and large amounts to every other country where our flag goes. In the ten years—from 1863 to 1873—our bullion exports, exclusive of mail, amounted to \$885,865,184. In 1873, to over eighty-four millions of dollars. During the ten



IN THE MOUNTAINS.

years from 1862 to 1872, we increased our indebtedness to England to the extent of \$1,750,000,000; all indebtedness to foreign countries must be paid in coin. The Bombay Chamber of Commerce reported that for the previous six years, India had absorbed an annual average of eleven and-a-half million pounds sterling of silver. India's silver-absorbing power is said to be almost unlimited, and the quan-

tity in Oriental countries never increases. Vast quantities are used for ornamental purposes. How to supply "the drain of specie to the East," is regarded by experts as an unmanageable problem. General business, and a thousand things besides, at home, continually require more. Every home has more or less silver and gold, solid or plated. A single American factory uses from one to two tons of silver weekly, in plating table-ware. In 1871, the amount consumed in the arts, in the United States, was over sixteen million dollars. Everywhere are gold and silver—solid, plated, or washed, and constantly these beautiful and useful metals are carried out of the country, lost on land or in the sea, worn and wasted away.

The demand for the precious metals increases with the growth and general prosperity of the people; and all, or nearly all, must be supplied from our mines. No other industry than gold and silver mining has, in so short a time, within so small an area, and with so few people as producers, built up and established so great and profitable a business, given to the world so much wealth, or made individual incomes so immense.

"Experienced miners know very well," says a well-informed journalist, "that silver mines of much value are only found in mountainous regions, where the indications are beyond a doubt. Volcanic agencies have, in some remote period, been exerted on a gigantic scale. Thus, in Mexico and the rich silver leads of Utah, the evidence of an upheaval force that elevated extensive ranges of frightfully rugged mountain ridges from profound depths, are so pos-

sible and probable, as to be admitted at sight, even by those who have no scientific qualifications for guiding them to that conclusion. It seems that silver is thrown up from a vast depth in the earth, where, from the quantity commingled with rocks in a condition of liquefaction, the quantity from which that on the surface was derived must be in great abundance in its primitive state below. Scarcely more than superficial scratchings characterize silver mining in the West. For thousands of years to come, those bold, hard, bleak mountains will be the scenes of human industry and skill, in pursuit of that which will make commerce thrive over the whole world."

Most of the greatest silver mines reach high elevations. The great Potosi, that has yielded over a thousand millions, is worked at a height exceeding that of Mont Blanc, and "Pasco" at the height of 14,000 feet. Most of the best of Colorado silver mines are at an altitude of from 8,000 to 12,000 feet or more above the sea, yet in the vicinity of fertile parks and unfailing streams. The silver mines of Colorado, Montana and Idaho, are believed to be the great mother veins of the continent, in extent equal, and in richness superior, to those of Mexico. Wherever in any part of the world, silver mines have been worked, they may be now; no true fissure mine has ever been exhausted. The whole business of silver mining consists in breaking down the ore—having penetrated the earth—rolling it to the mill, and reducing it.

Black sulphuret of silver is among the richest ores. In the process of stoping or breaking down



this ore, which easily crumbles, falls with the rest, but sifts in considerable quantities to the floor, there mixes with the loose rocks and is lost, especially where workmen fail to take proper precautions.

Improvements in silver mining have reduced expenses about one-half, but have not been able to overcome the water in mines, worked by shafts. Often in such, the water gains on the pumps,—even the most powerful, so as to stop the taking out of ore for weeks, and no skill can prevent recurrence of such stoppages. The improvements,—railroads and other conveniences, and superior skill of the workmen of our day, secure great advantages that the early Western miners did not possess.

Providence has blessed our country above all others, with the most magnificent profusion of mineral wealth.

Besides railroad connections, Montana has the Missouri River, which is navigable to the foot of the Great Falls, and open seven months of the year to steamers, with a channel that has recently been greatly improved, and extended above the Falls; after a portage of about 16 miles, a good boating river extends 200 miles further, directly into the very heart of the Territory.

It has been proposed to establish a new military post about half way between Fort Buford and Assiniboine, near the Canada line, in the path of the Sioux, who come from Canada. It will probably be located at Wood Mountain. If this should be established and Assinniboine completed, the defences of the Territory against hostile Indians will be ample.

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CHAPTER XXIV.

Fair Margins—Up the Yellowstone—A Visit to the Trappers' Camps—An Untrodden Wilderness—Night Visit from an American Lion—A Party of Indians—Their Habits and Costumes—The Indian's Love of Country—Hunters' Life—A Thrilling Adventure—A Grizzly Bear—Hostile Indians Warning the Trappers—Trapping Expeditions, Etc.

Capt. Johnson, master of the Elliott, had an eye to business, and had contemplated leaving St. Louis fully two months prior to the date of our departure—which had been delayed, for reasons already given—and he had, in pursuance of business and the expectation of making it profitable, provided a full supply of everything that would pass current among the trappers and Indians, such as guns, pistols, knives, axes, ammunition, clothing, provisions, fanciful calicoes, beads, looking-glasses and, as auctioneers say, “merchandise too numerous to mention.” It was his purpose to sell these things to the trappers and Indians at a “fair margin,” and take in exchange for them, the furs and hides that his customers had accumulated, and to make another “fair margin” upon the articles so taken. There are traders who sometimes take “unfair margins,” so it is written, and I am not prepared to say that Johnson was not one of them.

The fact that the Blackfeet and Crow Indians were becoming hostile to the trappers on the Yellowstone, induced the captain to make the trip up that stream, before ascending the Missouri. Our party consented to the proposal.

Passing up the Yellowstone, we did not make a permanent landing till we reached the mouth of Powder River,—which rises in the Big Horn Mountains, in the central part of Wyoming, and flows in from the southwest. Powder River is about three hundred miles long and a quarter-of-a-mile wide.

At this point two parties were formed, for the purpose of visiting all the trappers' camps above the head of navigation on the Yellowstone and its affluents, and notifying the trappers of the proximity of the steamer, and the fine opportunities presented for trade and transportation. It was arranged that one party should proceed up the north bank of the Yellowstone, and the other up Powder River, to the neighborhood of Fort Phil. Kearney, and then, after crossing the Big Horn Mountains, descend the Big Horn River to its confluence with the Yellowstone. The latter was an undertaking of considerable importance. Barstow, Warrington and I chose to accompany the expedition.

A trapper, who visited the boat just before we started, expressed the opinion that there was imminent danger to be apprehended from the ill-disposed savages, but our plan had been determined; and the first party, accordingly, set out,—all well armed. We rode with them through the narrow strip of timber that skirted the river. Reaching the open prairie, we took leave of our friends, who, undaunted by the discouraging remarks of the trapper, went gaily onward.

As we emerged from the dark woods the foliage of which had not yet faded or fallen, with the advance of the season, we beheld a land of beauty.

A level plain, more than a mile in width, covered with verdure, was succeeded by an elevation so gentle and regular that it presented an unobstructed view for nearly a score of miles. To the right, and to the left of us, the timber-line presented many miles of beautiful curves. Herds of elks and antelopes were seen grazing undisturbed, like cattle upon a meadow. An occasional grove dotted the surface of the prairie, and altogether the scene was one of placid beauty, most remarkable.

Returning to the steamer, we crossed to the opposite bank of the river, and pursued our untrodden way amid the wilderness. Following the course of the Powder River, we pitched our first camp at the mouth of the Mixpah—a creek that flows in from the west. Game being abundant, we were soon supplied, and after picketing our horses and arranging for the night watch, we repaired to our tents. The stillness of the night was occasionally broken by the hooting of an owl, the sharp barking of a fox, or the dismal howling of a wolf. At midnight, Nichols and Carrigan, who were on guard, detected the sound of a stealthy step, approaching in the rear of our horses. Peering into the depths of the forest, nothing save the sombre precincts could be seen by the dim light of the moon, but, suddenly, a scream, at once the loudest, longest, and most terrible ever heard, echoed on the still night. We were all quickly astir. Our horses were greatly frightened. Another moment, an American lion, the most ferocious of all our forest animals, except the grizzly bear, had fastened its terrible claws upon one of our pack mules. The poor beast reared

and plunged desperately in his efforts to rid himself of his enemy, but without avail. Hastily springing to the spot, we placed the muzzles of our guns almost against the breast of the panther, and fired with deadly effect. As soon as the mule was relieved of his foe, he uttered the most unearthly sound.

"Faith, an' if ye had done that a little sooner, d'ye see!" said Carrigan.

The next morning we went forward to a trappers' camp, on the river. The trappers were glad of the opportunity offered, and began at once to make preparations to transport their peltries to the boat. The trappers are a hale, hearty, happy and hospitable class of people. While we were at this camp, a party of Grosventre Indians, about twenty in number, passed, in the direction of the village, which was eastward on the Little Missouri. There were several women and children in the party, all of whom rode *a la clothes-pin*, and were very expert of the management of their fleet little ponies—more notable for fleetness than for beauty; "braves" with their guns across their knees, and squaws with their papposes bound on their backs in little baskets, which greatly resembled bark quivers. Some of these squaws were very comely in appearance, and one of them, in particular, was pronounced by Warrington—a man of great taste, as we know, very pretty, and was evidently so regarded by the young man, who rode just in advance of her. She may have been a bride on a bridal tour, for ought we know. The Indian belle before she retires greases her hair and face with liquid marrow from a bone;

the hair is then braided,—in the prevailing style, no doubt. In this manner the squaws of the Sioux, Cheyenne and some other tribes wear theirs; in the morning, the Indian maiden undoes the braid of the evening, which has given to her hair a wavy appearance, and permits it to fall about her shoulders. Frizzes have not yet come into vogue. The prevailing style of face painting is to make a general application of chrome yellow with finishing touches of vermillion, but often only a little rouge is employed. Her dress, other than the indispensable blanket, ordinarily comprises buckskin leggings and moccasins and a calico dress—sack pattern, with an opening for the head, and with short, flowing sleeves.

“I suppose,” says a very sensible writer, “we have but the faintest conception of the strength of the Indian’s attachment to the country he has long frequented. The white man loves the haunts of his childhood. In the earliest years of his life, Nature is the play-fellow of the child, his intimate friend and his teacher. His converse is with trees, grasses and flowers, with clouds and skies, zephyr and gale, brook, river and ocean, hill, mountain and meadow, with mellow sunlight, with calm and queenly moon and solemn stars. The living things have also been taken into the companionship by the child, or have in one way or another, borne close relation to his interests. But as the white child approaches maturity, he exchanges the simple and poetic pleasures ministered by Nature, for the pursuits of busy life. These too often remove him from the contemplation of Nature, and almost smother the memory of the influences she shed upon his opening mind.

The Indian, on the other hand, is all his life in intimate communion with Nature, attent to all her voices and observant of all her moods. Through all his years he is, as much as in his childhood, devoted to the study of the outer world, and dependent upon this pursuit for all pleasures analogous to those which we derive from poetry, art, and all the resources of refined society. The world is his gallery and library, and God the author, the poet, the artist. Therefore, that part of the world, in which he was born and lived and ranged, he loves with passionate affection, and reverences with superstitious awe. We cannot wonder at this. The least attractive landscapes present many phases of beauty. Even sandy plains and mountains of bald and rugged rock appear in the blue distance, or when variegated by light and shade, or glorified by the rich tints of sunset, unspeakably beautiful. But all the attractive scenery of this wide continent has lain under the eye of the Indian. The lakes, rivers, mountains, woods and plains have been his delight, and he has loved them better than we love. When in grand forest, sunlight and wind playing with the tree tops, wove golden lace work on green or sombre ground; where the bird sang and timid creatures browsed, the Indian made his hunting-ground and home. Here he lived and roamed, when the woods were decked with dew drops glittering in summer sunshine, or brilliant with the ice gems of winter."

The hunter finds strange fascination in the wild life he leads on the great plains and on the Rocky Mountains. Two results, I think flow from life in the open air,—man gains a real and desirable æsthe-

tic culture, and he thus develops self-reliance and strength. The hunter battles with wind and storm, braves many forms of danger, and becomes manly and self-poised. A hardier, more robust, manlier class of men than you find in mountain hut in all this region from British America to Mexico, you may challenge the world to produce. Nearly all these men are Americans. The superior enterprise and boldness of our people are apparent in all this frontier land.

The wild life of the West is as full of every element of interest and of danger, and far freer than that of the sailor. Nature exerts a strange power upon these wild, brave men. They are obliged to observe her in all her aspects, by day and by night, and they become enamored of the freedom of the lot that affords them such sweet fellowship with her. It is a mistake to believe the Indian incapable of feeling the same spell. He is in a high degree susceptible to the influences of Nature.

A certain Indian village built upon a high butte or mesa in Arizona, is remote from water and from the lands tilled by its inhabitants. By instructions from Washington, the agent of the tribe to which the village belongs, used every inducement to persuade the people to build a new town near the water and the grain fields. "Our fathers dwelt upon this hill and saw from it the yellow sun; here we, too, will live and die." This was the final answer. The Moquis of that village continue to this day to carry from a distance in earthen jars, the water that supplies their home. Similarly the roving tribes are attached to their hunting grounds.

The next morning we were again upon our way, in the valley of the Mixpah. Toward night we crossed the Divide on the east, and again descended into the valley of the Powder River. Our attention was attracted by a small herd of buffaloes, feeding upon the plain, about a mile to our right. Merideth and Hervey, neither of whom had ever been very successful in killing buffaloes, resolved to try their luck, and agreeing to meet us at a trapper's camp, situated between the forks of the Big and Little Powder Rivers, they started off. We reached the camp an hour before sundown, and were received with the hearty welcome which might have been expected from this ever hospitable class of people.

Night came and passed, but our companions had not arrived. Toward noon of the next day we went in search of them, being accompanied by several of the trappers. We followed our trail back to the spot where we had separated from our friends; then turning to the right, we followed their trail. The buffaloes had fled, in solid column, to a range of rocky hills, that extend to the river. One of the trappers suggested that in the hills, grizzly bears were numerous, and that the missing men might have chosen to try their luck with a grizzly, that by bringing in a bear's foot, they would redeem their reputation as expert hunters.

Passing onward to the hills, we found that the men had pursued the buffaloes hither. These hills are not formed into ridges and slopes, but are isolated, cone-shaped elevations, separated by numerous deep hollows, that seem to interlace in the manner of net-work. Here the rocks rise on either

side in perpendicular walls, three or four hundred feet high and form dark and gloomy canons.

We had advanced about a mile into these hills—which cover an area of about twelve or eighteen miles in extent—when we came to a place where the trail separated into two forks. We were assured by the trappers, and by our own hunters, whose powers of observation certainly seemed very wonderful to us then, unskilled as we were in woodcraft—that all the buffaloes, with a single exception, had turned abruptly to the left and passed down a dark defile in the direction of the river, while one which had been pursued by the horsemen, had kept directly on in a westerly direction.

We had gone about half a mile further, when we espied a full-grown grizzly bear, feasting upon the carcass of a horse. We were now seriously alarmed for the fate of our lost friends. After picketing our horses at some distance from the place where the bear was, we cautiously advanced to attack the animal. Upon near approach, it was observed that the bear had evidently appeased its hunger and was now lying upon the ground. When within about thirty yards of him, one of the hunters hurled a stone at him. At this he quickly rose from his position, glaring upon us and uttering fierce and angry growls and appeared most formidable. He was lean, and the loss of large patches of long hair and fur, together with his attitude and open jaws, all combined to render him an object of terror to those of us who had never before been placed in a similar position of peril. The beast started towards us, but a well-directed ball from our hunter's rifle instantly brought

him to the earth, and a volley of bullets riddled his body. It was one of the largest of the species.

We discovered the carcass of the buffalo which had taken this direction, and we later came to the spot where our friends had passed the night. It was in a deep chasm, between high, perpendicular walls of rock—a level of small extent. We fired our guns repeatedly and shouted as loudly as possible, but the echoes of our voices was the only answer that came back. We continued the search till night, following the trail through many an intricate and gloomy canon, into which the sun's rays never penetrate, and we encamped in the best locality we could select, but which was dismal enough. It became very evident that our companions had lost their way, and had been unable to extricate themselves from the labyrinth.

The next morning, we were early astir, and following the trail which led across the divide in the direction of Tongue River, through the grizzly hills; at length we came to a level slope, along which the trail ran in an easterly direction. We had proceeded but a short distance along the foot of the hills, when we were startled by loud yells, which we recognized as those of Indians.

It required but a few moments to bring us to the scene of action, when the whole situation was revealed at a glance. Immediately in front of us was an open space, and beyond this was a perpendicular rocky wall, facing the north, about thirty or forty feet in height, and perhaps half a mile in length. At the foot of the wall, and at an acute angle which formed a shelter on the right, Merideth and Hervey

had posted themselves, while a score of Indians were menacing their position, and yelling like so many devils. Just as we arrived in sight, and while we were yet unperceived by either friends or foes, the hostile band divided, nearly half the number riding rapidly in our direction with the intention, evidently, of charging upon our friends' left. The Indians swung round in a graceful hand gallop, till they were within fifty or sixty yards of us, and at a point directly between us and our friends. They never even looked in our direction, their attention being fixed upon their intended victims. The Indians could have shot the men had they chosen, but it was evident that for some reason, either for inflicting great cruelties or retaining them as hostages, they chose to capture them alive.

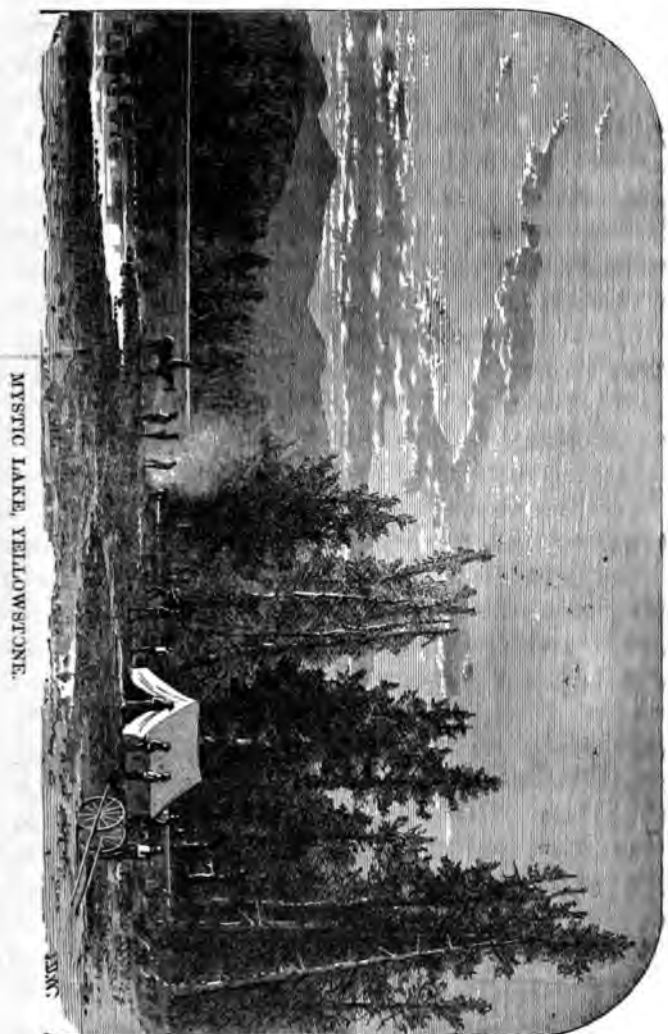
The savages had little in fact to fear from the men, for they each had but a single round of ammunition, and this they had resolved to hold till the last moment, and sell their lives as dearly as possible. The band being divided by the last named manœuvre, it was a favorable moment for our party to appear, and dashing forward with deafening shouts, and violent demonstrations, we presented ourselves between the parties. The Indians were taken by surprise and without a fatal shot by either side, the Indians dashed away with the fleetness of a herd of startled deer, and vanished as quickly from sight, as a village of prairie dogs, at the sound of the hunter's rifle. The savages had doubtless exaggerated our numbers and deemed discretion the better part of valor.

Our companions were most agreeably surprised

by our timely appearance. As we had surmised, they had lost their reckoning, and were in the pitiable plight of being destitute of ammunition, or provisions, surrounded by hostile Indians, and by ferocious wild beasts.

We started on in the direction of the trappers' camp, as it was imperatively necessary that the companions of our trapper guide, should at once be warned of the proximity of hostile Indians; and it was also necessary for our own safety, that we should move forthwith and with great caution, in order to avoid attracting the attention of the Indians, who, we confidently believed, were assembling in large numbers in our immediate neighborhood, and would attempt to intercept our return to the camp. It now lacked but a quarter of an hour to sunset. As soon as the shadows of night should fall, we could move with comparative safety from the Indians, as they will rarely engage in a conflict at night, however small the number of their enemies.

Pushing on as rapidly as possible in a southerly direction, we soon entered the Grizzly Hills. It was a moonless night, but the little stars shone brightly, and by the starlight we were able to pursue our way. Soon we reached the bed of a small creek, which fortunately for us was dry; following its course, which led between towering walls of conglomerate and calcareous rocks, we came to a pool of clear, cold water, of which we were in great need, but alas, for appearances, the water was so salt that neither men nor horses could drink of it.



MYSTIC LAKE, YELLOWSTONE.

2587

It was early dawn, when we stopped for that rest we so much required. On either side, the walls of a gloomy canon rose to dizzy heights above us. It was a comparatively safe retreat. After a few hours of repose we pursued our toilsome march, and at length arrived at the trappers' camp.

Trapping expeditions are usually organized under the direction of some trapper of great experience, and one who has some capital, as it becomes necessary for him to furnish outfit to the improvident members of the expedition. These are, however, frequently the best men in the party, when they have at last established their quarters near the haunts of the beaver; but when among dissolute companions, in some western frontier towns, their money slips through their fingers. Some of it is expended for the vilest whiskey, but the larger part generally finds its way into the pockets of the gambling thieves, who haunt all the places, to which our trappers resort, and hang over their victims like birds of prey, until they have fleeced them of their last cent.

Trapping expeditions vary in size, from two or three, to thirty or forty individuals, and occasionally a hardy and daring mountaineer will, to use his expression—"go it on his own hook." Sometimes the members of an expedition share equally with each other. Sometimes, like sailors in the whaling service, the trappers have their "lays" or shares, greater or less according to skill, experience and position. As soon as the expedition has arrived at the proper locality, and "signs" are observed, the traps are at once set, and business begins.

The animal, the fur of which is the most valuable and the most eagerly sought by the trapper, is the beaver—*Castor Americanus*. The fore feet of the animal are armed with powerful claws, which enable it to burrow in the earth and also to climb with facility, and to hold any object he may propel through the water to his dwelling. Their hind feet are palmed or webbed like those of a goose, and by this peculiarity of structure, they are enabled to move through the water with great celerity. The tail is elongated and flattened horizontally like a trowel. With this most useful and cunning part of the body, he mixes the mortar used in his dwelling, carries the mortar upon it, and uses this natural trowel in the building of his abode. The beaver is gregarious, living in villages, which sometimes number five or six hundred animals. Their dams are remarkably ingenious contrivances, and are frequently of great length. They are usually built obliquely across the stream, to present a greater resistance to it.

The traps in which the beavers are caught, are set under the water. The common steel trap is most generally used in their capture. Great caution must be exercised in setting the trap, and he who performs the task, must expose himself to the icy chilliness of the water.

Among the men, who have visited the region in which we now find ourselves, are Kit Carson, Bridgers, Grant, Young, Fitzpatrick and many others, whose sagacity and hardihood, have won great reputation for them.

CHAPTER XXV.

Preparations for Trading with the Trappers—Following a Trail—Indians on the War-Path—Hasty Departure—Fort C. F. Smith—The Mountains of Wyoming—An Inaccessible Mountain Range—Mountain Sheep—Departure of the Steamer—A Trapper's Statement—A Day of Trouble—An Indian Plot—A Little Act of Generosity Rewarded—A Long Journey—Wild Animals.

Our arrival at the camp was most opportune. The large number of trappers assembled there, were very anxious to dispose of their furs, of which they had large quantities, and when informed of the fact that the boat was lying at the Rapids, on the Yellowstone, and that they might there dispose of their entire stock, and obtain in exchange goods, of whatever kind they might desire, arrangements were at once made to transport it all to that point.

Many of the trappers had *cached* their furs, in the belief that search would be made for them by the Indians, and it became necessary to visit these deserted camps to exhume and pack the furs. From the manifest dissatisfaction of the Indians, and the hostility already evinced by them, it was probable that collisions would occur between them and the trappers, during their journey to the river.

We left the camp in company with the trappers, and during the whole of the first day proceeded in a northeasterly direction, stopping at noon only long enough to rest our horses. Toward night, two of our scouts came in, and reported that they had found the trail of a small war party, which they believed

to have been made by Blackfeet Indians, who had pursued a southerly course.

Among the most wonderful things connected with Western life, is the great skill and remarkable powers of perception, which experienced trappers display in trailing. In this branch of their calling, they attain a proficiency that is most surprising. They not only readily distinguish between the trails made by wild animals of various kinds, and by the Indians, but they can, with unerring certainty, determine the very tribe to which the latter belong; and not only this, but they as readily distinguish between the war and hunting parties of any particular tribe, and accurately determine how old any trail may be, whether made by man or beast, so preternaturally keen do their senses become, by the habit of close observation.

Our course was in the direction of the Tongue River, a tributary of the Yellowstone. We encamped upon its banks, but before the hour for retiring, one of our scouts reported that there was a village of Blackfeet Indians, less than a mile distant. As these Indians were known to be on the war-path, we deemed it prudent to depart forthwith. While we were bringing up our horses, a second scout came in, with the intelligence that the Indian village numbered about thirty lodges, located in a large grove of cottonwoods, and that the band, including probably fifty warriors, were engaged in one of their wildest revels. We mounted our horses and started off in the direction of Fort C. F. Smith. The probability that a large body of hostile Indians would soon be upon our trail, added celerity to our steps.

Fort C. F. Smith is located on Big Horn River, about fifty miles above its confluence with the Yellowstone. To reach it from the point at which we had at last encamped, would require a journey of seventy miles, directly off from the route to the Rapids; the trappers preferred to incur the perils to which they might be exposed in proceeding directly thither, rather than to go so far out of their way to obtain an escort, while we preferred to go to the fort, and, therefore, after a hurried consultation, three of us took our leave of the brave little company, and proceeded on our way. We reached the fort at sunset of the third day, and were received with marked consideration by the officers in command. Here, Barstow met an officer, formerly of Major Hatch's battalion, with whom he had, several years ago, formed a very agreeable acquaintance at Manitoba, and fortunately for us, this officer was about to proceed with dispatches to Fort Phil. Kearney—in the Big Horn Mountains, of Wyoming, to which point we also desired to go, and we, therefore, accompanied him, arriving there after a toilsome journey of nearly five days.

In grandeur and sublimity, the mountains of Wyoming are unsurpassed by any on the continent. We gaze with rapture upon a landscape of undulating hills covered with a rich growth of waving, golden grain, and the eye follows with enthusiasm, the tiny silver brook that winds along its borders; but the contemplation of the massive rocky walls, that tower above you to the dizzy height of thousands of feet, awakens in the soul a deep sense of awe almost of trepidation. These awe-inspiring heights

upon which we now look, are the mountains of Wyoming, with their snow-capped peaks, leaping cascades, and picturesque valleys.

"It would seem," says Rousseau, "that, in rising above the habitations of man, we leave behind all low and earthly sentiments, and in proportion as we approach the etherial regions, the soul contracts something of their unalterable purity." "All natural phenomena," says Saussure, "there present themselves with a grandeur and majesty of which the inhabitant of the plain has no idea. The winds and ærial electricity, act there with an astonishing power. Clouds are formed under the very eye of the observer, and he sees a tempest break out under his feet, which devastates the plains, while the sun is shining around him, and the sky is serene and clear over his head."

Raymond thus apostrophizes the grand mountain peaks:

"Deserts of mountains, you, like the ocean, set the boundaries of nations; you have your part also in the continual circulation of its waters; you compel us to bow down before the imposing spectacle of your grandeurs; but how much less terrible is your majesty, and how restful for weary man is its contemplation! You fill all souls with the subtle influences of a splendid domain which is metamorphosed at every step. You vivify and you calm. What pure and beneficent enjoyment you confer! What living and eloquent proof you furnish, of the littleness of the idols which luxury has in honor among men, when you spread out before them the immensity of your perspectives and the severe mas-

ses of your eternal pyramids; when man sees from your summits, the smoke of great cities, rise here and there from countries which cringe at your feet. What architect could ever imitate your magnificence, and where are the treasures that could reward him? All the sons of men joining in the work, could not build a single tower as high as your humblest peaks.

The elder nations, setting you apart from the rest of the world, considered you the only worthy dwelling-place of the gods, and indeed your peaks, half hidden in the clouds, seem like signals springing from the earth to point out to man the road to heaven. Nature alone is capable of breaking the monotony of the globe by such edifices, and without asking the slightest aid from us, she has herself, opened the doors of your valleys, as if she took pleasure in calling men to the temples in which she appears to them, with so much power and beauty. In my admiration, therefore, it is of little consequence that these sublime heights are impassable walls; I boldly rank them among the most precious gifts that the human race owes to the beneficence of the Creator."

"The most powerful European nations are nourished on the slopes of mountains, and all those great national migrations, which, in the course of centuries, have changed the political face of the world, and have exerted the most influence upon the destinies of the human race, have gone out in sight of their eternal snows."

The Big Horn Mountains, in the neighborhood of Fort Phil. Kearney, extend through nearly two

degrees of latitude. The range forms the Divide between Powder and Big Horn Rivers, and culminates in Clouds' Peak, whose lofty summit is caressed by the fleecy folds that float lazily through the air. Other peaks of less note, raise their pondrous crests to vast heights and look down upon the low-lier hills.

Numerous creeks and rivulets flow from lofty elevations and pour adown the jagged cliffs in cascades of beauty. These and the numerous valleys, glens and grottoes, form a picture grandly beautiful and sublime.

In the western part of Wyoming, the Wind River Mountains rise in sublimity of proportion, till they pierce the clouds. Fremont's Peak, the monarch of the range, rises to the height of 13,750 feet; and other peaks of lesser importance also attain high altitudes. This remarkable range is everywhere inaccessible to the foot of man. Numerous exploring expeditions have vainly attempted to cross it. Col. Reynolds' expedition was turned back by it in 1859, and Bridgers, who accompanied the expedition, declared, that "a bird can't fly over that ridge without taking a supply of grub along."

One of the most interesting animals that inhabit this region, is the agile and pretty little creature known as the Rocky Mountain sheep—*Ovus Montana*. Like the chamois of the Alps, it delights in the elevations of the mountain regions, and is frequently seen on lofty and precipitous heights. Its immense horns present quite a formidable appearance, but the animal does not rely upon them for defence, but rather upon attaining a position on the

mountain heights, inaccessible to its pursuers. Although a diminutive animal, in frequent instances its horns are three feet in length, and weigh from twelve to fifteen pounds. Its hair is short, smooth, and of a light brown color. While skipping from height to height, its horns serve as a balance, enabling the agile creature, to maintain its position upon narrowest shelves of rock, where it would seem impossible to do so. The chase of this little animal, is attended with the greatest difficulties. It is exceedingly keen of scent, and to approach it, the hunter must exercise the utmost wariness.

I recollect the futile efforts I once put forth in pursuit of a small flock of mountain sheep. It was my first experience, and not remarkably successful. When first seen, they were upon the extreme point of a high and jutting peninsular rock, and I thought by approaching them in the rear, there would be no difficulty in killing at least one of the number. After a full half hour of toilsome climbing, I found myself at the neck of the half insulated rock at the farther extremity, of which the sheep had been seen. It did not seem possible for the game to escape, for the rock was three or four hundred feet in height, and the sides were nearly perpendicular. Creeping cautiously along, I caught the glimpse of one, as it whisked around the sharp angle of a rock about a hundred yards away, and he, the most tardy of the flock, had disappeared in a twinkling. As I clambered with greatest difficulty down the steep declivity, I began to doubt my ability as a successful chamois hunter, but I had the satisfaction of knowing, that none of my companions had ever been more successful in pursuit of this animal.



We spent several days in the neighborhood of Fort Phil. Kearney, which is located at the head of Clear Fork,—a tributary of the Powder River—and then started upon our return to the Yellowstone. Arriving at the Rapids, what was our chagrin and disappointment, to find that the Elliot had left her moorings, and was not to be seen. We could only surmise the cause of her departure, but after riding for some distance along the river bank, we fortunately met a trapper, who confirmed our suspicions.

It appeared from his statement, that the men who had been sent out to collect the furs of the trappers had proceeded in the performance of their duties with great celerity and success; that the river banks in the vicinity of the boat, soon presented a most animated appearance. Mule after mule was relieved of his burden, and day after day business continued brisk and satisfactory to all parties. The captain, no doubt, congratulated himself upon the "fair margin" he had made in every instance. But there came a day of trouble. The Indians having learned of his operations, presented themselves in considerable numbers, but though they coveted the pretty things they saw, they brought neither peltries nor valuables of any sort, although lavish of promises of payment at a future time, should the great white chief choose to credit them; but Chief Johnson, thinking that a beaver's skin in the hold of his vessel, was "worth two in the bush," declined their proposals, but made a few worthless presents—so utterly valueless, that even the Indians scorned to receive them, and with quick, but careful scrutiny of everything on board the steamer, went away, but only to perfect their designs for capturing her.

There can be no doubt they would have executed their designs, pillaged and burnt the steamer, and massacred all on board, but for timely information and warning. Among the Indians who came to solicit credit or presents, was a young Indian girl, who was delighted by the sight of a small mirror, which Mr. Merideth held in his hand, but, unlike the others of the party, she merely admired without asking for it, or for anything else. This peculiarity was noticed by Merideth, and he not only gave her the mirror, but a gaudy bead necklace, and several other ornaments, one of which was a showy scarf. This simple act of generosity saved the lives and property of all on board, for at twilight the next evening, a single Indian presented himself on the steamer's deck, and, showing the scarf to establish his identity, said that he was the father of "Sunbeam," to whom the scarf and other presents had been given, and then hurriedly exposed the plot of his people to attack the steamer at midnight. He had risked his own life, to attest his gratitude to the white men.

The company offered him money, and valuable presents, but he looked upon the things with indifference without speaking a word. Thinking that they had not found a suitable gift, they bade him choose for himself, but with a dignity of manner that gave emphasis to his words, he said in the Sioux language:—"I did not come for presents," and turning proudly away, quickly disappeared in the forest beyond the river's bank. What a lesson to white men, who regard the Indian only as an animal, devoid of sentiment or human feeling!

Within an hour, the steamer was on her way down the river. The trapper whom we had met had been charged with the duty of informing us upon our arrival, and the trappers generally, of the occasion for the abrupt departure of the steamer for Fort Benton.

A long and tiresome journey was before us. It became necessary to proceed at once, overland to the fort. The distance we had to travel was nearly three hundred miles, through a country, the scenery of which is as varied as it is beautiful, grand and sometimes the reverse. Our course was northwest, and as we passed up the slope from Powder River and looked back over the broad expanse of rich, productive land lying below us, and away in the distance, a scene of beauty and magnificence was presented, rivaling in picturesqueness any that we had hitherto seen.

Down, down, down in gently sloping, undulating surface, the meadow land rolled in placid beauty, till broken by the dark-green line of forest trees that fringed the river banks, and then on, on, on with a never ending up, that seemed to unite earth's emerald hues with heaven's imperial blue. And as the landscape passed away in the distance, it rose in wave-like elevations, nearer and nearer the skies, presenting an aspect of indescribable magnificence and beauty.

Beyond the river, a beautiful lake lay smiling and glistening beneath the autumn sun, and around the borders of this gem of the prairies, hundreds of mountain willows were seen, with their slender branches and silvery leaves, coquetting with the western breeze.

As I glanced over the rich landscape, and drank in the exquisite beauty of the scene, I felt that the poor, untutored red men were perfectly justifiable in their futile attempts to preserve those charming fields for themselves, and for their children forever. But westward is the course of empire, regardless of the divine rights of the children of the forest, who recede before advancing civilization, as do the deepening sombre shadows of night, before the first rays of the rising sun. Not many more years will pass, ere the ancient prophecy of the old Indian seer will be fulfilled, and the death-song of the last warrior will be sung on the golden shores of the broad Pacific. As, in the long ago, the Mound Builders, in the West, gave way to the more vigorous red men of the forest, so will the latter, in turn, yield their inheritance to the stronger and more cunning arm of the white man. And as the Indian, in the vigor of his manhood, pursued the fleeing deer thoughtlessly over the unnoticed graves of his predecessors, so will the white man gather his corn and bind his sheaves over the unknown grave and dust of the Indian.

On leaving Powder River, we went forward in the direction of old Fort Sarpy, on the Yellowstone, which we reached without accident or adventure, and where we halted for two days. Fort Sarpy is about thirty-five miles below Big Horn City, situated at the confluence of the Big Horn and Yellowstone Rivers. A large extent of territory in the vicinity of the Fort, is not surpassed by any on the route for beauty and fertility.

Leaving the Yellowstone for the last time, our

course lay across the country, in the direction of the head-waters of Judith River, down the wild, picturesque and interesting valley of which we proposed to make our way. As soon as we passed over the high, rolling ridges of the Musselshell country, from the Yellowstone, we found an abundance of antelopes and other wild game, such as I never saw equalled in any other region. There is probably no portion of the United States, that furnishes anything like the deer-shooting that is found in Montana to-day, and the same may be said of elk, moose, bear, buffalo, antelope, mountain sheep, wild geese, ducks, brant, grouse and other small game.

Moose was frequently seen, indeed we sometimes saw at least forty in a day. The broad and branching antlers of this animal—*Alce Americanus*—give it a most formidable appearance. When wounded, or pursued by dogs, and at bay, the moose is a dangerous adversary, as it will not then hesitate to attack the mounted hunter, and not unfrequently impales a less agile horse upon its pointed horns. It is the largest and most valuable of the deer species of America.

The famous hunter, John Polliser, who spent many years of his active life upon the eastern slope of the Rocky Mountains, and in and about the region of the Missouri and Yellowstone Rivers, relates many remarkable, curious and interesting adventures and anecdotes, in connection with this animal,—incidents within his experience while following his favorite vocation in this region. At one time his dogs having bayed a magnificent male, at the foot of a precipitous rock, behind which the hunter chanced to be,

he cautiously approached the brow of the précipice and peered down, to watch the fray between the dogs and the moose.

The rock upon which he was standing, projected somewhat over those below, and the moose had taken up its position immediately under the overhanging rock. Becoming much interested in the manner in which the moose with blows of his feet attempted to repel his enemies, Polliser incautiously stepped upon a loose piece of stone, and in an instant was landed prone upon his side, immediately in front of the infuriated animal. The fall caused no serious injury, but the moment the moose caught sight of him, it became still more exasperated, and attacked him with great violence. The man's life was in imminent danger, from blows of the creature's horns. Before he had time to extricate himself, the angry beast made a terrific thrust at him, forcing one of the sharp points of its powerful antlers entirely through his arm, just above the elbow, and but for the timely aid of his faithful dogs, it would doubtless have inflicted fatal wounds upon him, ere he had extricated himself from his perilous position. The faithful dogs at once sprang to their master's assistance. The hunter recovered his feet, and by a dextrous stroke with his long knife, killed the stag.

The same frontiersman on another occasion, saw one of his dogs pierced entirely through the body, by a powerful stag that had been slightly wounded, and brought to bay by its fleet and tireless pursuers. The hunter shot and killed the stag. Polliser's greatest delight was hunting grizzly bears, and many are the thrilling adventures and hair-

breadth escapes, still related of him by western trappers.

After leaving the region of the Muscleshell River, we passed through an exceedingly wild and interesting country, between the Judith and Little Belt Mountains, meeting no hostile Indians, and after a safe and pleasant journey of fifteen days, arrived at Fort Benton.



CHAPTER XXVI.

Fort Benton—Arrival of the Elliot—The Great Falls of the Missouri—Departure of the Elliot—In the Gold Region—The Characters Seen There—Off for Idaho—The Snake Desert—The Grandest Cataracts of the Continent—Mining Regions.

Fort Benton is a town of ten thousand inhabitants, at the head of navigation on the Missouri. It is the oldest town in the Territory.

We were kindly received by the officers at the Fort, and enjoyed their hospitality for three days, when, to our great joy, the Elliot arrived. A few days later, we visited the Great Falls of the Missouri—thirty-five miles above Fort Benton. The falls are six in number; the first is the highest, and to this point steamers of light draught may ascend. The distance from the falls to the Gulf of Mexico, by river, is 3,956 miles.

A sheet of water, more than a thousand feet in width, falls a distance of eighty feet, presenting a scene of grandeur, once witnessed, never to be forgotten.

The Missouri is formed by the "Three Forks"—the Jefferson, Madison, and Gallatin. The most westerly of these—the Jefferson—rises in the extreme southern part of Montana, and is the largest of the branches. The next in importance is the Madison, which rises in the southwestern part of the National Park. The Gallatin is the most easterly, its source being in the northwestern corner of the Great Park. At slight expense the Missouri

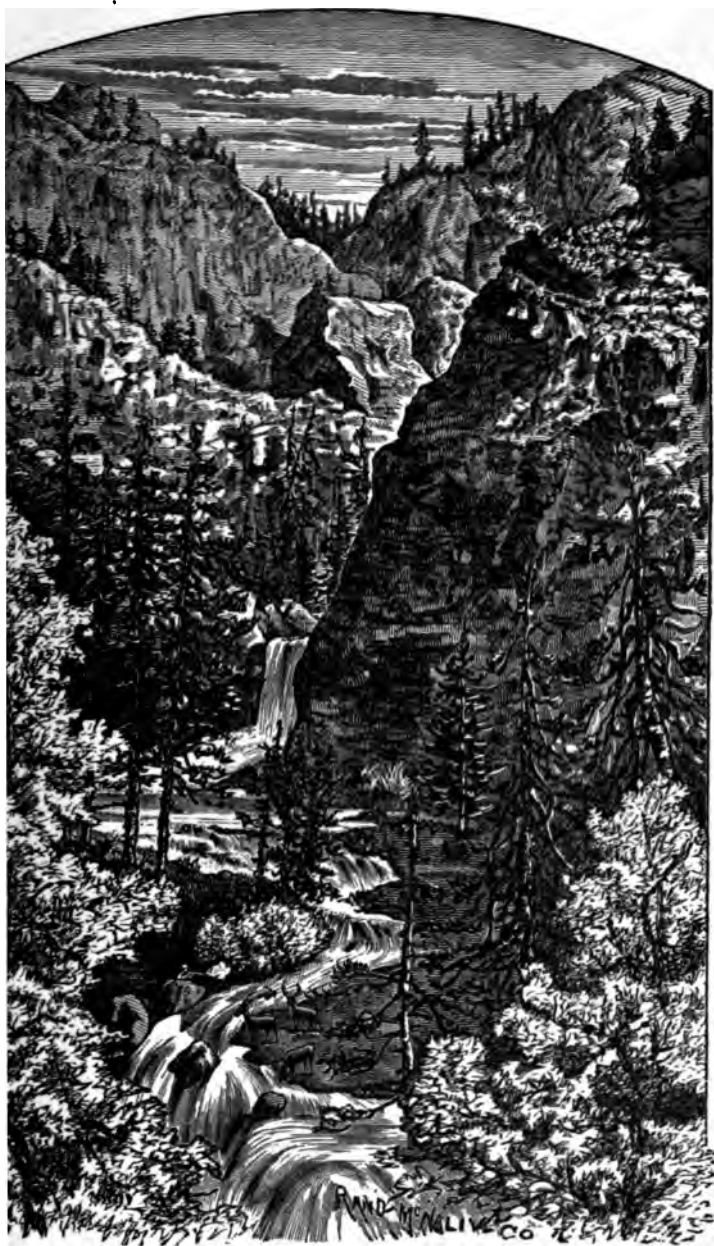
can be made navigable above the falls, nearly, if not quite to the junction of the three forks. The improvement has already been begun.

The confluence of these rivers was first reached July 27, 1805, by Lewis and Clark. The vast extent of territory acquired by the Louisiana purchase, in 1803, included almost half of our extensive domain. Scarcely had the transfer of this region been consummated, than preparations were commenced for exploring it. An expedition numbering thirty-two men, was organized and placed under the direction of Capt. Lewis and Lieut. Clark. As shown by the success of the enterprise, no happier selection of leaders could have been made.

The expedition left the mouth of the Missouri, May 4, 1804, and, proceeding up the broad channel in three large open boats, arrived on the 27th October, at the village of the Mandan Indians, situated on the great southeastern bend of the river, about two hundred miles below the mouth of the Yellowstone. Here they encamped, and spent the winter, gathering what information they could concerning the surrounding country, and the manners and customs of the Indians who inhabited it. On the 7th April, 1805, they again embarked on their perilous journey. Having freighted several large canoes with their effects, they steadily pursued their way, sailing successfully against the swift waters of the Missouri, and toward the last of the month, encamped at the mouth of the Yellowstone. Many thrilling and perilous adventures were experienced by the travelers as they pursued their way through the trackless region.

Capt. Lewis, at the head of an advance party, was the first to reach the Great Falls of the Missouri. A few days later, the entire party stood beneath the mighty cataract, and gazed in wonder upon it. Immense columns of clouds, rising from the basin, grew larger and taller, till finally, meeting the rays of the summer sun, they floated away in golden splendor over the surrounding hill-tops, while the waters surged, foamed and whirled wildly as they dashed upon the invisible rocks below. Above, around and beneath, the scene was grand and sublime. Passing on above the other cataracts, the voyageurs pursued their difficult way through the grandest solitudes of this picturesque region. A few miles above the highest of the Falls, they discovered and named the great canon, "The Gate of the Mountains." The scene here presented was in keeping with the aspect of the strange region through which they had passed. For six miles the grand river—a quarter of a mile in width—flows through an immense chasm, the perpendicular walls of which, rise to the height of twelve hundred feet. Down into the very heart of the mountains, the swiftly flowing waters have cut their way; and still the resistless current rushes on, cutting deeper and deeper.

Lewis and Clark, with their band of explorers, were nearly a year and a-half in these western solitudes. Crossing the mountains, they followed the course of the Columbia River, till they met the tides of the great ocean beyond. On their return, they explored and named many of the smaller streams in the vast region, hitherto untraversed by white men.



IDAHO MOUNTAIN SCENERY.

The period of our engagement with Capt. Johnson having expired, Barstow, Warrington and I took our leave of the pleasant companions of our journey, and the steamer left Fort Benton for St. Louis. Crossing the Rocky Mountains at Cadott's Pass, we proceeded to the gold regions of Montana.

The life of the gold-seeker is one of ceaseless toil and ever recurring disappointments. The hopes that allure him on—the golden dreams and visions of wonderful success in the near future, are but too seldom realized; the fortune he so confidently expects to obtain, is never within his grasp; he builds and rebuilds airy castles, only to see them again and again toppled over by the cruel hand of adversity.

The average daily earnings of each man engaged in the gold mines of the West, is not over a dollar and a-half per day. Fortunes are still made in the gold mines, but they are generally made by men who possess large capital, and not often by the penniless toiler. How much better would it be in every way, for young men, and for men at any age, instead of thus trusting to chance, to accept a certainty—to secure that by healthful toil, for which they strive at the expense of all the pleasures of life,—at the expense of the abridgment of life itself, and so generally strive in vain. This surety of success is open and attainable by all who will, and is found on the plains of Montana, of Dakota, of Kansas, Nebraska, and elsewhere in the West—not in digging for gold, but in guiding the plow and in herding flocks, not in the service of another, but for himself, and upon his own broad acres.

All kinds of characters congregate in the gold

regions of the West. One may meet representatives of almost every type of man under the sun. Here are seen the bearded and sunbrowned European, the almond-eyed Mongolian, and the African; here are men of all nationalities, of all colors, ages and dispositions,—men inured to crime from their childhood, and other men whose feelings are shocked by the blasphemies of their vile co-laborers, all mingling together, and all toiling with one common incentive,—the accumulation of wealth. Each man of this heterogeneous population is a “character.” For the sake of loved ones at home, or to satisfy ambition, avarice, or perhaps to escape the penalty of violated law, the man has become a voluntary exile from society.

A ramble through any of the towns of this region that dot the hillsides or line the valleys—or towns in any mining region—will reveal scenes that fully evidence the fact that a mining community is a little world of itself.

Here is an enterprising Jew, always on hand “mit der sheepest goots,” which he is very anxious to sell for a very little money. There is a genuine “down east” Yankee, with his ever eager inquiry, “Be yeou from New Hampshire? Dew tell!” There is the gambler, ready for games and greenies, at all hours, by day or night. There is the blustering bully, bristling with knives and pistols, ready to pick a quarrel at any time, and preferring a game of fisticuffs to a dinner. There is the genteel loafer, who would rather starve than labor. Here is the pawn broker and his brother-in-law, who is ready to take anything except your soul and body, as collateral for an advance of a few dimes.

One peculiar character, who succeeds more easily than any other, in adapting himself to all circumstances, is the "heathen Chinese." He seems to be singularly fitted to fill any station, that he may be called upon to occupy—always provided that the station be a very humble one; and with the present state of feeling by those who know him best, he is not liable to be invited to take a seat very high up. Whatever the task that may be imposed upon "John" he generally performs it with a ready hand, and always goes away satisfied, when he finds that there is not the least possible chance of securing another one of your coppers—if there is, he will cultivate that chance. Heathen John is not over particular in the matter of diet. Anything that swine would turn from in disgust, may be seen at his board, mice or rats, bats or beetles, never come amiss, but on the contrary are esteemed as delicacies. He eats anything that he can masticate. As a natural scavenger, he is a success; the hog, the vulture, the buzzard or carrion crow, are dainty and fastidious creatures compared with him. Another of his peculiarities is his money-making propensity; and he has also the art of keeping it, every penny. He never spends his substance in riotous living—not he. If a dollar finds its way into his hand, ninety-nine cents of it will find its way to the Celestial empire.

If we consider the Chinaman in every phase of his character, his habits, social capacities and religion, we are forced to the conclusion, that although he is industrious, he has his "constitutional drawbacks;" his industry is his only good point worth

~~—~~ mentioning; the country would be better off with-
~~—~~ out him.

The miners and trappers are proverbially honest men, and their "word is as good as their bond" any time.

After a long, tedious and perilous journey we arrived in the Territory of Idaho.

This region, which now forms the Territory of Idaho, was but little known prior to the year 1852, when gold was discovered upon the Pend d'Oreille, a little river in the extreme northern portion of the country, and though these placers were not remarkably productive, the attention of prospectors was attracted to them, and to various other localities, but it was not until the rich discoveries, in 1860, upon the Oro Fino creek—a tributary of the Clearwater River, about a hundred miles to the south of Pend d'Oreille, that any permanent settlements were made. In 1863, a territorial form of government was organized.

Idaho embraces an area of ninety thousand square miles, and is the most mountainous and rugged region of any of the Territories. Between the barren mountain ranges and along the course of the large rivers, there are rich and fertile valleys, which are attracting the attention of settlers, but agriculture will never be the ruling industry of this region; throughout the Territory much of the land is susceptible to improvement by a proper system of irrigation.

"In the arid public lands of the remote West, including Arizona, Dakota, Idaho, Colorado, Nevada, Montana, New Mexico, Utah, Wyoming and parts of

Kansas, Nebraska, Oregon, Texas, with Washington and the Indian Territories, there are, in round numbers, not less than 900,000,000 acres. Not one per cent. of all this land has as yet been sold by the Government, and—adds the journalist, from whose paper I quote,—it will not be sold for many years, unless some means be found to supply it with water. It has been proposed, lately, to sink experimental artesian wells on the arid land, in order to irrigate it. Government surveys show that 200,000,000 acres of the whole are mountainous, and that they could not be rendered fertile with any quantity of water. An equal amount of land consists of lava-beds, without either soil or vegetation, and of desert plains of drifting sand. This leaves 500,000,000 acres of plain and valley susceptible of high cultivation, if they only had water. But a very small percentage of this can, under the most favorable circumstances, be reclaimed by using, however efficiently, the rivers and small streams, and a great deal now employed for pasturage, has such scanty grass, that twenty-five acres are often needed for the support of each head of cattle. In Colorado alone there are 41,000,000 acres of such poor land, capable, with proper irrigation, of producing twenty-five to thirty bushels of wheat to an acre. The West wants Congress to appropriate \$50,000 for boring artesian wells, and it is believed by some of the ablest geologists, that the wells could be sunk. Private enterprise will not undertake the experiment; but, if the experiment were once made successful, there would be abundant capital to carry on a work, which would prove to be of inestimable value."

The natural scenery of Idaho, is for the greater part, grand and picturesque.

The Owyhee, Boise and Fayette valleys, are remarkably fertile and well-watered. The valley of the Wiesser contains not less than two hundred thousand acres of excellent farming lands. Camas Prairie, the oldest settled region in Idaho, contains thousands of acres having an exceedingly fertile soil. The Bruneau Valley, which occupies a well-sheltered position, and possesses a comparatively mild climate throughout the year, and also contains an unlimited extent of excellent pasturage, is a common wintering place for stock, thousands being driven to it for that purpose every fall.

All these valleys are in the southern portion of the State, as is also Bear Lake Valley—a Mormon settlement of five or six thousand people, the lands of which are under cultivation. The hill sides furnish rich pasturage for the thousands of cattle, horses and sheep that roam over them.

The principal mountain ranges are the Blue, Boise, and Salmon River Mountains; the latter extend from the western boundary, nearly through the Territory, in a southeasterly direction. The country is watered by innumerable streams, the largest of which is Snake River, the course of which is semi-circular, flowing along the western boundary till it joins the Columbia River. It winds through a vast plain, the most barren, desolate and dreary ever seen by man. It is a sage desert, seemingly covered with the outpouring of a volcano. It is a waste so utterly destitute of vegetation, that even the wild beasts shun it.

The river is navigable for steamboats to Lewiston, four or five miles from Walla Walla, Washington Territory, but beyond, it flows through many impassable canons. In its course through the interior of the Territory, there are several falls of great interest, the principal ones being the Salmon and Shoshone. The former is a favorite fishing resort for the Indians, since the falls prevent the salmon from ascending the stream.

Next to Niagara and the Yosemite Falls, the Shoshone is the most grand and sublime cataract on the continent. Here we lingered for hours, entranced by the awful grandeur and beauty of the scene. We saw the Falls at noon-day, and again by moonlight. A sheet of water, one thousand feet wide in the narrowest part, falls from a height of two hundred feet in an unbroken current, which seems like a glistening wall of silver, extending from the precipitous, rocky ledge above, to the awful chasm below, from which rise fleecy clouds that in the sunlight display the beautiful tints of the rainbow, or in the moonlight, glitter like a cloud of diamond dust—a spectacle of exquisite beauty, amid surroundings that are at once indescribably wild, weird, picturesque and grand.

In various parts of the Territory are numerous lakes, some of which are singularly beautiful, especially the largest—in the northern part of the Territory, Lake Pend d'Oreille, from which rises Clark's Fork of the Columbia River. This lake is navigable for small steamboats. At its southern extremity is the first "gold town" or mining settlement in Idaho—Pend d'Oreille. Northwest of this

Lake is another, which though smaller, is no less beautiful. It is the source of a fork of the Columbia.

Large tracts of the Territory are covered with grand old forests, which furnish abundance of timber, and in which game in great variety is found. In summer, the climate is delightful, but in winter, the cold is often intense, and though the mercury does not indicate a temperature lower than that of Minnesota, a greater degree of cold is sometimes experienced. The snowfall is also very great, and for many weeks causes a suspension of mining operations.

Till within a few years, the Snake Indians—the most savage and daring tribe on the continent, gave great trouble to the miners, and the settlers generally, killing individuals whenever opportunity offered, and boldly stealing whatever they could lay their hands upon, and did not hesitate even to steal horses and other property, from the forts. At one time, it is said, they carried off horses and mules from Fort Lyon, under the very eyes of the garrison, which was too small in numbers to oppose effectual resistance. They are now peaceful and content upon their reservation, which embraces a vast tract of the best land in the western part of the Territory, between the Bitter Root and Blue Mountain Ranges, and through which flow several streams.

There is a great difference in the character of the several Indian tribes of the northwest, as will be seen from the report of the Indian agent at Duck Valley: "There are now at Duck Valley reserva-

tion, including men, women and children, 1,200 Indians, and, as far as I can ascertain, all Shoshones, called by the Indian Department Western Shoshones. There may be some who have Piute blood in them, but I believe they are very few. They, instead of being the lowest type of cricket eaters, are the best class of Indians I have ever seen, and I have seen many. They are busy cultivating their land, showing great industry in that pursuit, as well as in building roads to the timber ground, and to Mountain City, ten miles from the reserve. Not the slightest disturbance has occurred, and, of course, no white man injured or killed. They are well cared for by the government."

Boise City, the capital of the Territory, is situated on the north bank of the Boise River, about fifty miles from its confluence with the Owyhee River, which marks the boundary between Idaho and Oregon. It is a growing city, and has a large local trade.

We visited the most important mining regions of the Territory, which have contributed largely to the treasure of the nation and the world. In many parts of Idaho, there is both gold and silver in immense quantities.

Crossing the Boise River and the Sage Plains, or Alkali Desert, we arrived at the Snake River, into which within a distance of a score or two of miles, flow as many streams from the Owyhee region, all dignified upon the map, with the name of rivers. Crossing the Snake River, and continuing our journey southward for thirty miles further, we arrived at Silver City, ten or twelve miles east of the bound-

ary of Oregon. This is in all respects a "live" town, and though comparatively new, is prosperous and enterprising. Here is published one of the most readable and valuable news journals of the great Northwest—the *Avalanche*, ably edited by J. S. Hay, Esq.

The pioneer settlement of this region is Boonville, where the early miners pursued their labors in constant peril from the Indians. Ruby City, on Jordan Creek, in the immediate vicinity, and five or six miles from the western boundary, though scarcely more pretentious than its neighbors in the general style of its buildings, has long been an important mining town. Here, as in most other places in the Territory, placer mining has long since been abandoned for the more profitable quartz mines, which have made the name of this region as well-known in the East, as it is to the miners of Idaho.

Ruby is near the bottom of a deep canon. In the vicinity are mountain peaks, varying in height from six hundred to two thousand feet above the town. Some are bare rock, with deep gorges and jagged peaks, while others are clothed with timber. One of these peaks, known as War Eagle, is five thousand feet above the level of the sea. Here the most wonderful discoveries of gold bearing quartz have been made. Upon this mountain, but five miles in diameter at the base, hundreds of lodes have been located, and many of them have yielded vast quantities of gold. The large quartz mills here are generally owned by Eastern capitalists. The ore is of extraordinary purity, and several of the lodes yield incredibly large sums. The lodes are all nearly per-

pendicular, and most of them steadily increase downward in width. Large numbers of Chinamen find lucrative employment in washing the crushed rock, which has passed through the mills, and from which has already been extracted, all the gold that can be obtained by the processes thus employed.

The greater part of the mining machinery used in Idaho, is brought from California. Chicago and St. Louis machinery is generally used in Montana, Colorado and Utah. From the summit of War Eagle Peak, we looked down upon the lower hills and upon the Snake Valley, stretching for miles away, and as far as the eye could reach, we beheld the dim outlines of towering mountains.

The tunnel of the Oro Fino mine extends hundreds of feet horizontally; then at the terminus there is a perpendicular shaft, one hundred and eighty feet above, by which the daylight enters. The walls of the mine are granite, smooth and well-defined, from two to seven feet apart. The ore is nearly white, and some of it is as soft as wax, and may be easily cut with a knife.

A mineralogist, who is well informed concerning the mining interests of Idaho, in speaking of the Salmon River country, says: "It has remained for that vast region of Central Idaho, which our latest map-makers still insist in making 'unexplored country,' to develop mammoth ledges, traced miles upon miles, whose silver ores are as rich as those in the narrow ledges of Arizona, and far more so than those of Leadville, to duplicate Black Hills Mountains of native gold ores, so fabulously rich that we are slow to believe the proven truth, and to unite



with these fascinations, grand forests, many fertile valleys, broad grassy feeding-grounds, for herds to come, and enchantments of scenery, game fields and trout streams, fresh and probably unrivalled. It will, in all probability, be the scene of our next great mining stampede, one not second even to the Leadville furore. It is already a prominent bullion producer."

The Salmon River region comprises Yankee Fork, Wood River, Saw-Tooth, Bay Horse, Yellow Jacket and other districts,—an area of twenty thousand square miles in the heart of the Territory. The region is bounded on the north by the main range of the Rocky Mountains, on the east and south by the great lava-plateau of Snake River, and on the west by the Boise and other mountain ranges, long since explored and mined. Its eastern edge is 150 miles west of the Utah and Northern Railway, and its southern boundary reaches within 200 miles of the Central Pacific Railroad. The Oregon division of the Utah and Northern Railway is projected to cross a valuable belt at the southern end of the region, and wagon roads already penetrate its best developed and apparently richest sections, in the centre and at the northern edge. The country is far less isolated or difficult of access, than the public generally suppose.

Salmon River, a deeper, clearer, and a far more turbulent stream, than the Susquehanna, gathers its volumes from dozens of tributaries in the high mountains of this region. The Wood River, several large affluents of the Boise and other fordable mountain torrents flow through this region, draining

fertile valleys of limited extent. The highest peaks are twelve thousand feet above the sea. The mountains are more rugged than anywhere in the Rockies, the Saw-Tooth Range, especially, being a marvel of diamond pointed peaks, jutting crags and rocky heights, which even the mountain sheep will not attempt to scale. Pine timber is very abundant on the lower mountains, almost everywhere. The region is full of lakes, and its canons are among the grandest ever discovered.

The prospects of an early construction of a railroad from some point on the Utah and Northern Line, through to Oregon, and passing near the Wood River mining region, have stimulated prospectors to turn their attention in that direction, and with the most fortunate results. Four or five galena belts have been opened up, and it is the belief of all who have explored that region, that belt after belt of argentiferous galena ores, exist all the way from the low hills at the base of the Wood River Range, to the divide of Wood and Salmon Rivers, a distance of forty-five miles. This great belt of high grade galena and carbonate ores extends in a southwesterly direction from Bay Horse district, near Challis, through, by the head of East Fork, to Wood River, and over to the south tributaries of the Boise. This comprises the most extensive silver bearing range known, being from twenty to forty miles in width and 130 to 140 miles in length. The principal mining camp in the region, is about one hundred miles from Bonanza City.

The mines in the Lower Wood River district are divided into two camps. The first is in the outer

Foot-hills, and five miles from the old Emigrant road leading to Oregon and Washington Territory. A great many locations have been made and considerable work done. Ore has been shipped to Utah which realized \$150 to \$200 per ton. The veins vary in thickness from one, to two-and-a-half feet. The ores are galena, easily smelted, running from forty to sixty per cent. lead, and from \$80 to \$250 silver. There is an abundance of iron in the vicinity. The leads are generally well defined, with bold croppings.

The second camp is located about six miles above the first, and on the main Wood River. The first lode was discovered in 1864, but nothing was done upon it until 1872, since which time large quantities of ore have been taken therefrom, and shipped to Salt Lake, much of it being sold for \$200 per ton. The ore is similar to that found in other parts of Wood River, carries a large per cent. of lead, and considerable oxide of iron. The lode is four feet wide, with a vein of ore two or three feet, running through it. There are eight or ten leads equally good. The ore yields from \$150 to \$300 silver, per ton. The climate is favorable for a winter camp.

Warm Spring Creek is a tributary of Wood River, flowing in from the west; it is properly the west fork of Wood River. It is about 20 miles above the Emigrant road, and nearly midway between Upper and Lower Wood River mines. The mineral belt is located about ten miles from the mouth of Warm Spring Creek, and was discovered in the summer of 1879. The first mine is the Idaho.

There is an open cut, 20 feet long and 15 feet deep, on the ledge, exposing a large body of antimonial silver ore, that assays from \$80 to \$205 per ton. Wood River is the next location adjoining the Idaho, and showing a good body of ore, that yields \$150 per ton. The Black Horse exposes two feet of galena ore, that yields \$300 silver, per ton. The Ten Broeck, located in August, 1879, shows from twelve to fifteen inches of galena and antimonial silver. The vein is exposed for nearly 100 feet, by shaft and open cut. The ore yields from \$150 to \$275 silver, per ton. The Sovereign has an open cut on the ledge, sixteen feet from the surface, showing a magnificent body of gray carbonates, that assays from \$200 to \$900 silver, per ton, and 45 per cent. lead.

The Upper Wood River mines of the region are similar in character to those of Middle and Lower Wood River. In July, 1879, the abundance of the ore and the high assays, attracted the attention of miners far and near. To the close of the year, seventy-five locations had been made, many of them very promising. In September, of that year, Galena City was laid out, and the Wood River district, embracing 600 square miles, was organized. The mines of Upper Wood River are all in the vicinity of Galena City. The belt, so far as developed, is about three miles in length and two in width. It is a net-work of veins, the croppings prominent, and often traceable for thousands of feet. The Leviathan, and several other mines, yield largely.

I have been thus minute as this wonderful region is but little known, and to this time does not even appear upon the maps of the Territory.

There are many mines in Alturas county, which with judicious management would doubtless yield immense returns, judging from recent results.

The Owyhee and other mines on that section of War Eagle Mountain, are especially productive. Probably in addition to the above, the best known and richest mines are the Black Jack, Florida Hill, Boonville, Sierra Nevada, and Lone Tree. The amount of bullion is steadily increasing, new mines are constantly being opened, some of them being very rich, while the older ones are as constantly yielding up their wealth. There is a growing interest in the mineral resources of the Territory, which are of incalculable extent. The great want of the country, is more capital to work mines both on Florida and War Eagle Mountains. The Oro Fino and Poorman, both of which have in the past yielded treasure to the amount of millions of dollars, offer the most tempting opportunities to capitalists.

The mines in the southern and eastern portion of the Territory have begun to attract the attention that their immense wealth merits, while the rich soil of that vast uncultivated region in the north, with its healthful climate, and propitious surroundings generally, render it most inviting for emigrants, and a few years must effect a wonderful change there, in the way of opening up the country.

CHAPTER XXVII.

Washington Territory—Natural Features and Scenery of the Country.
The Walla Walla Region—Its Condition, Present and Prospective
—The Climate—Puget Sound—An Adventure.

We left Lewiston, a little town on the Snake River, quite near the Indian reservation, and entered the county of Walla Walla, Washington Territory, which though containing at the present time but two towns—Walla Walla, and Waitsburg,—is the richest county in the Territory.

Washington, as the reader is aware, is the extreme northwest of our country, lying between the 46th and 48th degrees north latitude, and between the fortieth and forty-eighth degrees west longitude from Washington, D. C. It contains seventy thousand square miles, and has a population of 63,220. It is an empire in and of itself, and has millions of acres of unappropriated lands, although there is now a large immigration pouring into the country. Though land speculators are holding real estate at high figures—from thirty-five to forty dollars per acre, for the most desirable regions controlled by them,—land equally good, can be purchased for five dollars, or appropriated for nothing beyond the trouble of staking it out, or it may be secured at government prices, as preferred. The great grain raising region comprised within the limits of the Territory, will in a few years, be susceptible of sustaining a population ten times greater than it is at present.



The vast region embraced within the boundaries of Washington, is diversified by lofty mountain ranges, beautiful valleys, and glens, and extensive plains. The upper or northern quarter from Puget Sound to the eastern boundary, is a region of mountains, and the Cascade Range extends through the Territory from north to south, dividing it into nearly equal parts. These mountains, as also the Coast Range and Blue Mountains have many towering peaks, which rise to the height of from eight thousand to nearly twelve thousand feet, among the highest is Mt. Baker, Rainier, Adams, St. Helena, Hood and Shasta. The Territory is watered by the Columbia River—the boundary line, on the south, separating it from Oregon—by the Snake, and by scores of tributaries of these majestic rivers, and by numerous mountain torrents.

The natural scenery of Washington is singularly picturesque. Fifty miles north of the rich gold region, on the Wenatchee River—a tributary of the Columbia, which dashes swiftly down the mountain side to the southeast, through canons of terrible depth and over rocks of gigantic proportions, that form beautiful cascades—is Lake Chelan. The lake, though not large, is very beautiful, both in itself and in its surroundings. There are but few lakes in the Territory, and these are very small.

To the north of Walla Walla, is the Great Plain of the Columbia River—a region extending over an area of nearly five thousand square miles; and north of this is the Great Plateau of Spokane; while on the west of the country which is hemmed in on three sides by the northern bend of the Snake River, is a vast Sage Plain.

The more populous regions of Washington are upon the western slope, on the Pacific Coast, and on the many arms of Puget Sound. But Walla Walla merits a more elaborate notice. The value of its taxable property in 1879, was three million dollars, half of it being real estate. The county has thirty-three surveyed townships, nearly its whole area, the only unsurveyed land being that which lies along the summits of the Blue Mountains, and valuable for the timber it contains. Of the land under cultivation, 62,649 acres are apportioned for grain—wheat, barley and oats, while many thousands of cattle and horses roam over the region.

The prosperous little city of Walla Walla has a population of four thousand, which is double of that of the county at large. The valley of the Walla Walla has been thus described by Bishop Haven, and no description could be more just:

“It was a great surprise to me to enter on this superb valley. For three days, we had toiled on steamboat and locomotive, toiled up this most majestic river, around the portages, and up three hundred miles of water. The banks were wooded, or rocky in bluffs, so that the whole distance, hardly a green meadow had gladdened our eyes. The green waters were very gladsome. The scenery of the river grows mellow constantly, as we touch the valley of the Walla Walla River, but not till we draw near the town do we discover the magnificent entertainment. The valley of the Walla Walla is before us. ‘Lovely, lovely,’ is our translation of Walla Walla—‘water, water’ is said to be its real meaning. A score of miles north and south, two

score east and west lies the level landscape. Wheat-fields glow far up the mountain side; poplars stand like soldiers along the roadways. Blue haze rests on the hills. Emblazoned in trees and grass, peep out church spires. We are amazed at such a Tad-mor, whose pillars are green and gold, far up three days' slow steaming into a burning, treeless wilderness. Such is the valley of the Walla Walla."

It is a great centre, and destined to wield a greater influence in the future. Not fifteen years have passed since the first house was erected, and already, between four and five thousand persons are residing here; large brick and iron stores, banks and hotels are built; the chief streets are wet down, and kept cool, and business by millions is transacted. For two hundred miles it is the centre of trade. It is three hundred miles away from its only other rival in the northwest—Portland, and can have no nearer rival.

The railroad running here from the river is already branching itself into the country. Two arms are being stretched out to neighboring settlements, and more are to follow. Its eye is on the east, and the Northern Pacific will have to pass its door, or it will make for itself a junction with both that and the Union Pacific.

One peculiarity is not so agreeable. A fine brown-black alkali dust creeps up into the air, and does not settle night or day. At Salt Lake City, the dust rises in the day, but gets to bed before morning. Here no breeze nor dampness allays the dust. It simply continues. It looks like a cloud or fog. Only the rains kill it, and they come seldom in early

autumn. When the wheat begins to come to market, the dust accumulates; fifteen inches thick, it is then on the ground, and it lifts itself up in the atmosphere, and takes possession of the valley. A ride outside of the town, introduces you to this most unwelcome character. The wheels roll round in dust a foot deep, bring it upon the wagon side and dump it in on your clothes, so thick that it can be shoveled off, if you had a shovel. The horse is lost to sight. You enter into the cloud and abide in it, so long as this wading continues. When the heavy teams have cut into this soil a foot or more, the ash-heap is fearful; yet it is a heap of richest ashes. The soil brings forth abundantly. Unwatered, the wheat rushes to perfection. Miles on miles, stretch out the vast yellow richness; curling around the foot hills, up the sides, over the range goes the golden belt. We can endure a little dust in the highway, for such profusion of gold dust in the field.

The Northwest is rapidly filling up. It is full of gold as well as wheat, of silver no less than of sheep and cattle. Its surface is wild, rough, rocky, alkaline, with valleys hid among the hills. No Illinois softness, or Ohio rolling landscape, woods and grasses, or Indiana levels, or Michigan variety of green, is here. It is dry and parched, with grease-bush and sage-plant, save where the water comes. Irrigation is its life.

Under the grand peaks that line the cascades—in sight of an old, unpainted block-house of the Hudson Bay Company, with tall bluffs covered with tall firs, rising on either hand, with the swift green river rushing beneath my feet, I feel the thrilling

strength and calm of this munificence of nature."

The climate of Washington Territory, though generally healthful, is widely different from that which we had just left, and widely different from other regions eastward in the same latitude.

"On our west coast, the isothermal line bends abruptly northward. San Francisco, in the latitude of Richmond, has the climate of Savannah. Victoria, on Vancouver Island, far north of Quebec, is as warm as New York. In Portland, Oregon, roses grow in open air throughout the year. Walla Walla, in Washington Territory, latitude forty-six degrees north, corresponds in temperature to Washington City, in thirty-nine; Clark's Fork, Idaho, in forty-eight, to St. Joseph, Missouri, in forty; Bitter Root Valley, Montana, in forty-six, to Philadelphia, in forty."

All points on the Pacific Slope are as warm as those from six to ten degrees further south on the Atlantic side. This difference is by some, supposed to be due to the very numerous hot springs in the Columbia region, and elsewhere from the Rocky Mountains to the Pacific, but the prevailing theory is, that it is caused by a current of warm water and air, from the Indian ocean, striking the coast at an acute angle, near San Francisco, and thence flowing northward.

Olympia, the capital of the Territory is a growing city, situated upon a southern arm of Puget Sound, upon the line of the Northern Pacific Railroad. It is a place of much importance already, and is destined to become one of the great cities of the Pacific Coast. Its geographical position is especially favor-

able for an extensive trade. There are very many thriving towns upon the coast as well as in the interior, and at the present rate of immigration, these towns will soon become populous, and new ones will spring up in the favored regions. The growth of the Territory has been especially rapid within the last few years, and will become still more so, as soon as the public appreciate its vast resources. Like other Territories to the South and East, it is rich in gold, silver and other valuable ores, but thus far, its mining interests have not received as much attention as they certainly will do in the near future.

Puget Sound is the great feature of Washington, and a more beautiful expanse of water is not to be found on the globe. Its many arms branch out in every direction, and its placid waters—as clear as crystal—are everywhere dotted with little islands; some of which are of singular beauty. These we visited. The day was beautiful and the scene enchanting.

In the vicinity of the Sound is a heavy forest—a prolific source of wealth. The lumber trade is immense; and it may now be estimated by millions of dollars. It is constantly increasing. Every coast town has its saw mills. Washington furnishes the best quality of ship timber, and this finds a ready market not only all along the coast, but in the Sandwich Islands, the East Indies and even Australia and some countries of northern Europe. The fishing interests and fur trade of the Territory are very considerable, and a source of great wealth.

The forests abound in valuable timber, the supply

of which is seemingly inexhaustible, and are full of game of every species. The Indians are peaceful, and though, it is said, they are inferior in some respects to the more eastern tribes, they are very apt in acquiring the vices of the white men, who have come among them, and it is not at all rare to



SILVER LAKE, WASHINGTON TERRITORY.

find them engaged in gambling, and as great adepts as any of the class. We visited the extensive coal regions, a source of a brisk trade and of large revenue.

In many parts of the Territory there are beautiful cascades and numerous canons of great depth and sublimity, and especially upon one of the large tributaries of the Columbia, with an unpronounceable Indian name, signifying "The Terrible," which

was one of the finest lumber regions in the country, and this we determined to explore. Providing ourselves with ammunition and the necessary outfit, we attempted to make the journey on foot. Our first day was a pleasant experience, but the second was not. The country was wild, rugged in the extreme, and the underbrush so dense that it was at times almost impossible to proceed. At length we reached a region where the land was more level, and traveling was by no means difficult. It had never occurred to us that there might be danger of losing our way in the trackless forest, and we went confidently forward till toward night. The sun had not gone down, but in the forest it was nearly dark. Arriving at a suitable locality, near a running rivulet, we were about to kindle a camp-fire and make preparations for the night, when we heard the sound of human voices, and proceeding in the direction from whence they came, we suddenly found ourselves in the midst of several Indian lodges. We were kindly received by the red men, who, having often been in the coast towns, spoke our language well enough.

We encamped for the night, and next morning proceeded on our way, the Indians having assured us that we were within a few miles of a settlement, before reaching which, we would pass through a region where a number of wood-choppers were at work on the banks of a large water-course. After a long and tedious journey, observing, as we supposed, the directions we had received, we arrived—not at the settlement, not at the lumber camp, but in the vicinity of the very Indian encampment we

had left in the morning, having made a circuit of many miles. Another night with our Indian friends, who were greatly amused at our want of skill in wood-craft, and we started next morning under guidance of a stalwart Indian, who volunteered to accompany us, and about mid-day found ourselves at the lumber camp.

There were a dozen brawny men, with long hair and full beards, and of several nationalities. They gave us a hearty welcome, and offered us food and comfortable lodgings, which we gladly accepted. Wishing to reward our guide, Warrington incautiously opened his belt, in which he had several hundred dollars in gold and silver, and placed a piece in the hand of the Indian, who then departed.

I observed that the act was noticed by several of the men, but it did not then occur to Mr. Warrington that it was a most imprudent measure, however much he thought of the affair at a later time. We were informed by the lumber men that a large panther had, the previous evening, been seen in the vicinity of the camp, and that it would be prudent to share their lodgings, rather than to pitch our tent elsewhere; and, unsuspectingly, we assented. That night, by the light of the camp-fire, we passed a pleasant hour, and gained information concerning the river and canons and cascades, which increased our curiosity to see it for ourselves. Our tent that night, was of the branches and boughs of trees. Before retiring we spoke to each other of Warrington's imprudence, and took the precaution of sleeping with our rifles by our side. About midnight, a stealthy step was heard, approaching with greatest

caution; softly, then evidently pausing to listen; at length an arm was cautiously thrust between the bushes, and, as silent as a shadow, a man stood before us. In an instant Barstow sprang up and seized the villain by the throat, but with equal dexterity he struck at Barstow with a long hunting knife, which, fortunately, inflicted but a very slight flesh wound, and a moment later had vanished. The camp was a scene of confusion—the woodsmen were instantly astir, and, singularly enough, not a man was missing. Diligent search was made, but the villain, whoever he was, had escaped. It was surmised by the men that it was our Indian guide, who had returned for a greater fee; but we had had a glimpse of the intruder by the dim fire light, and knew him to be a white man. He was, as we believed, among the number who came to investigate the cause of the alarm.

The next morning we went forward upon our expedition, and accomplishing the purpose for which we came, we proceeded to Portland, the capital of Oregon.

CHAPTER XXVIII.

The Columbia River—A Trip to Portland—Iron Mines—The Beautiful Valley of the Willamette—The Resources of the Territory—The Future Commercial Emporium of the Pacific Coast—Mountain Scenery—Climate, Etc.

Down from the lakes of British Columbia, southward, along the base of great mountain ranges for five hundred miles, flows the majestic river—the Columbia, receiving from point to point, the willing tribute of scores of great streams, and of a thousand mountain torrents, which in eager haste come, dashing madly over precipitous cliffs and through wild and deep canons—onward rushing, like fleet coursers flecked with foam, they bring their sparkling liquid wealth to the kingly river of the great northwest, that rolls in majesty onward, for four hundred miles beyond, to where the setting sun throws his last golden rays upon the in-rolling waves of the western sea; there it expands to a width of several miles.

Leaving the little town of Lexington, situated upon the southern bank, we took passage upon a river steamer. For fifty or sixty miles, our course was eastward. To the magnificent views of grand mountain and valley scenery on either hand, was added that of little towns and hamlets on the river banks. At Monticello,—through which in early time will run heavily freighted trains over the Northern Pacific Railroad—the river bends sharply to the south, for a distance of fifty or sixty miles.

Arriving at the mouth of the Willamette—the great western tributary which flows in from the South, we continued on our way to Portland, a distance of twelve miles from the Columbia, and one hundred and fifteen by water to the sea.

Portland is a pretty and rapidly growing city, of about twenty thousand inhabitants. It has many imposing business houses and elegant residences, and is destined to become a great city at no distant day, having all the elements of solid and permanent prosperity. Within fifteen miles of Portland, iron ore has been found in great abundance, some of it yielding from fifty to sixty per cent. of the metal, and in the immediate vicinity there is both coal and wood in limitless supply. This mineral is a great source of wealth to the people of Oregon, for, on the Pacific coast alone, not less than a hundred tons of iron are required daily, and this demand will be vastly increased as railroads multiply, and mining regions become developed. The foundries of California and of Oregon are constantly doing an immense business, in making the stamps and other mining machinery, and, even in full blast, cannot supply the present demand.

In the extent of coal and iron, essential elements of national wealth and greatness, our country surpasses all others. The United States has one square mile of coal-field to every fifteen square miles of territory. This, in the great extent of our possessions, gives us an estimate of 200,000 square miles of workable coal. Compare this area with the number of square miles of coal-fields in the British Islands, given on the authority of their geologists, as 8,130 square miles of workable coal.

From the product of her coal and iron mines, England, for two centuries, has monopolized and ruled the commerce of the world.

Her prosperity is involved in the duration of her coal-fields. It is estimated by the statisticians of Great Britain that their available supply of coal will be exhausted, under the present rate of consumption, in three hundred years from the present time. We may therefore form an idea and rough estimate of the great wealth that is stored away in our exhaustless coal-fields, to be developed with our energy as a free people, under the protection of a republican form of government.

Scarcely less valuable will the iron mines prove to Oregon, than her immense silver and gold regions, the enormous wealth of which has been reported, and evidenced by heavy shipments of bullion.

We proceeded by rail to Albany, eighty-six miles distant, passing through the beautiful valley of the Willamette. For miles and miles, we saw rich and productive farms, and orchards of delicious fruits, of varieties common to the latitude, but of larger growth; farm houses with pretty gardens, immense barns, telling of great harvests, cattle in large herds, and everything affording evidence unmistakable of the greatest thrift and prosperity. Here, a vast expanse of prairie, and yonder, large groves of fine timber, with here and there a partial clearing, where the hand of enterprise and willing toil is adding to the wealth of the country, and securing the inheritance heaven designed for all, a home of comfort, happiness and thrift. This delightful valley, the most populous of any region in the Terri-

tory, is from thirty to sixty miles in width, and comprises not less than five million acres, the soil of every one as rich as Eastern gardens.

The Willamette is navigable for more than a hundred miles, except at Oregon City, where locks have been required to pass around the Falls—a grand water power which will in time, no doubt, be utilized for turning mill wheels; for the capitalist cannot fail to see that this little town may easily be made a great manufacturing city. He would not be obliged to purchase wool abroad, for of all the pursuits in Oregon, there is perhaps none more generally engaging the attention of the people than sheep-raising.

We visited Salem, still further to the South, and many other places west of the mountains, everywhere discovering evidences of present and increasing prosperity. The delightful region of the Willamette valley afforded many charming pictures for memory's gallery, to which we turned with delight a little later on, when visiting lands less favored with natural scenery.

Ten years prior to the gold discoveries in California—in 1849, emigrants from the Eastern States and from Europe, came to Oregon, through the South Pass. The charming valley of the Willamette was then the only favorite region, but lands quite as desirable in other parts of the Territory, have since that date, become the chosen home of thousands, and the gold and silver fields have induced still other thousands to come and "try their luck" in mining.

Oregon is not only rich in gold, silver, and iron,

but also in copper, lead and marble. She sends to the markets of the world vast quantities of lumber, wool, fish and fruit.

The outlook for Oregon is most promising. It has all the elements, and many important resources of a rich and prosperous State, and before the lapse of many years it may become the leading State on the Pacific Coast; and in the region between the southern boundary of Oregon and Puget Sound in Washington, may rise a commercial emporium greater even than San Francisco is to-day. The future of these Territories is full of grand probabilities which the years of the next decade will doubtless develop into realization, by a continuance of the wise policy which now prevails, of good government, enterprise and avoidance of land speculations. New towns and villages are everywhere springing up, and the great influx of immigration is evidence that the superior attractions of this vast region are already becoming widely known and justly appreciated.

Oregon has an area of more than a hundred thousand square miles, being four hundred and twenty miles in length, and two hundred and forty in width—lying between the 42d and 45th degrees north latitude. It is diversified by mountains, valleys and plains. The great ranges of mountains are the Cascades, which extend through the Territory from north to south, and the Blue Mountains, in the eastern part. There are several mountain peaks especially notable for their great altitude; among which are "Pilot Mountain,"—so called by Colonel Fremont—"Hood," "Jefferson," "Three Sisters," and a few others.

There are two systems of climate in Oregon, doubtless owing to the great northern range of mountains. During the rainy season, west of the mountains, rain falls almost continually. In the region east of the mountains, the climate is colder, with more frequent frosts. There is also a great difference in the floral productions and in the forests. The varieties of wood most abundant in the western division are oak, maple and mountain laurel—the latter a very beautiful evergreen, which sometimes grows to the great height of seventy or even eighty feet. It has shining leaves of a deep, dark green, and it is said that the tree sheds its external layer of bark annually, leaving the trunk and branches quite smooth, and of a delicate pale red hue.

As in Washington, the mountain sides, especially in the southern part of the Territory, are clothed with heavy forests.

Passing to the eastern division, we find the trees chiefly of pitch pine, red and white fir, juniper, aspen and cottonwood. Along the creeks, willows grow very abundantly, and in the mountains there is found, in considerable quantities, a hard and beautiful wood known as mountain mahogany. The pitch-pine is, however, far more numerous than any other tree; the mountains in the south and central parts of the Territory being heavily timbered with it.

There are many beautiful lakes in Grant and Jackson counties. The country generally is drained by numberless rivers and streams; the largest being the "Willamette," "Des Chutes," "John

Days," "Crooked," "Powder," "Owyhee," etc. Between the Cascade Mountains and the western spur of the Blue Mountains, in Wasco County, there is a vast sage desert, which is in singular contrast with the extensive and delightful valleys in Grant County, on the east. The valleys of the great rivers throughout the Territory, are exceedingly fertile.

Stein Mountain, the highest mountain peak in the southern section, is seventy-five miles south of Fort Harney, and twenty-five miles south of this post is a broad expanse of water, known as Malheur Lake, in the vicinity of which are extensive swamps. To the southwest is Harney's Lake. Immense flocks of water fowl of various kinds resort to both of these lakes in summer and fall. The soil of the valley in some places would be well adapted for raising grain, were it not for heavy frosts. It is an excellent grazing country. The stone used for building purposes in this region, is of volcanic origin, easily shaped when first quarried, but very hard upon exposure to the air.

Before leaving Oregon, we visited the Des Chutes or Fall River, to see the wonderful canons and beautiful cascades, which led the French explorers to give it the name it bears. We also ascended the highest peak of the Cascade Mountains, and though the ascent was toilsome in the extreme, and not a little perilous, we were repaid by the new experience gained. There are many things in life vastly more agreeable than climbing steep mountains, so steep that to proceed a dozen rods sometimes requires a half hour of severe toil. After climbing patiently

and hopefully foot-by-foot for a height of three or four thousand feet, it is not remarkably inspiring on reaching the summit of a peak, to find ourselves completely enveloped in clouds so dense that nothing can be seen beyond the circumscribed area upon which we maintain a precarious foot-hold.

Descending from the peak, we entered the deep ravine leading to the Falls. Perpendicular cliffs shut us in, while through the centre rushed with arrowy swiftness the great tributary of the Des Chutes River. Then we entered a forest of dark pines, and walking on for a mile or so, caught sight of the white mists, amid which rainbows were playing. Soon we began to ascend the mountain side, till we reached a little green arbor, just opposite the Falls. They are not as grand as some we have seen, but have great picturesque beauty. The circling mountains seem to shut in the sound, making the roar almost deafening, as down the mountain side poured the swift waters in a sheet of white foam, hundreds of feet in extent. A vast basin of rock received it, and then the waters dashed in fury down into the abyss below. Clambering down the dangerous declivity, we retraced our steps along the gorge.

The population of Oregon in 1869 was one hundred thousand; it is now probably 150,000—five times as great as that of Washington Territory. Oregon contains 60,975,360 acres—Washington 44,796,160 acres; no danger to settlers from being overcrowded in either Territory.



CHAPTER XXIX.

Off for California—The Fort Benton Party—First Ride Over the Great Pacific Railroad—Wonderful Scenery—Mountains and Canons—Hot Springs—A Race for Life—Arrival in California—Carson Valley—Lake Tahoe—Mining Interests, Etc.

By stage and by rail, we proceeded to Ogden, Utah, the junction of the Union and Central Pacific Railroads, with the purpose of passing through the "Silver State" to California. A more direct route might have been chosen, but as the gentlemen of our party, who had returned from Fort Benton in the Elliot, proposed to join us at Ogden, we assented to the arrangement, and made a long detour, for the purpose of meeting them,—all the more readily, as none of the party had ever passed over that great national highway.

Our friends had boarded the train at Omaha, and upon their arrival at Ogden, we joined them.

Leaving Ogden, which is 882 miles distant from San Francisco, we soon had an unobstructed view of the Great Salt Lake. With two engines attached, we left the delightful valley, and the long train toiled up the mountain side. At length the summit was reached. The beautiful lake was no longer seen; but before us rose new and varied scenery. Utah was passed, and we had entered Nevada—a vast Territory of 84,000 square miles. The view was tame and uninteresting. We beheld only a barren waste of worthless land, utterly destitute of vegetation, if we except the ever present sage

bush. There was no sign of civilization, nothing to denote the presence of a single human being, or that one had ever visited this desolate region, except that now and then we passed a little rude railway station. and at long distances a house, time worn, and as cheerless to all appearance, as the region itself. How or why people live in such isolation from the world, amid solitudes so monotonous and cheerless, I leave others to determine, being utterly unable to do so.

We are still surrounded by bald mountains, and arid, trackless regions, that not even the proposed artesian wells for irrigation can, by any possibility, render capable of bearing enough of vegetation to serve for a sheep's sustenance for a single day. Here we have found an "American Desert"—great or small, the extent yet to be determined. My former respect for the old time map-maker began to return—perhaps, after all, we have a "Great American Desert."

But we must bear in mind that this is a mineral region, and in the infancy of its development. Six or eight kinds of minerals are found here, and it may be believed that in the mountains and plains of this desolate region is garnered up wealth enough to enrich the whole world.

As our train is dashing onward over this treeless, trackless region, we will glance at that part of the route over which our friends had passed in crossing from Omaha to Ogden.

Just beyond the precincts of the flourishing city of Omaha, they passed through a delightful farming region, the abundant grains and grasses everywhere

evidencing the singular productiveness of the soil. The country is sufficiently undulating and watered, but soon the undulation sinks to the level of a plain. There is no timber, not even a copse or tree to be seen. The soil becomes poorer; the occupants of the rude frontier cabins do not even attempt to make a garden; but bunch grass and other coarse varieties are abundant enough here, and cattle roam over the plain. Soon the Platte River is reached and crossed, and the trains arrive at Kearney Junction. Beyond this place our old aversion—the interminable sage bush begins; desolation and barrenness increases with every mile, till scarce a bird or beast, or tree or shrub relieves the weary eye. Dreary solitude reigns on all sides, relieved only by an occasional village of prairie dogs with their strange consorts, the owls and snakes. The snake makes a dinner of the prairie dog, and the owl of the snake, but the prairie dog who escapes his mortal enemy, fares worse than the others—he feeds upon expectation surely, for there is nothing tangible to satisfy his appetite.

Reaching the point where an ascending grade begins, the first mountain ranges appear in the dim and hazy distance. Soon afterward, the train arrives at Cheyenne, a flourishing little city, but dependent for the staff of life upon neighboring States. But the traveler, weary of monotony, experiences a sense of relief in knowing that the train has already begun to ascend the Rocky Mountains. Two engines are now required, for the grade is steep,—at the rate of sixty-eight feet to the mile, and for one mile it is ninety. The road winds amid pro-

jecting rocks, until finally, the summit is gained; an altitude of eight thousand feet above the level of the sea, and rock-ribbed mountains towering high upon either side.

The almost endless variety of mountain scenery is always remarked by the traveler. Mountains never weary the eye—they always present some phase of novelty, some new wonder or some detail of interest. We may weary of the vast plain and of the expanse of ocean, however startling their first impression, for they present only monotony, but the endless variety of the “everlasting hills” rising in majesty above the plane of earth, affords delight however often, or from whatever point of sight we view them.

Some of these mountains rise perpendicularly, others ledge on ledge, terrace above terrace; others slope gradually and gracefully from base to summit; some rise in colossal grandeur, one massive rock upon another, as placed in position by the skill of man, others in promiscuous heaps, like mighty castles, the storied walls and jutting peaks of which had been jostled by an earthquake; some conical, others triangular,—all of wondrous grandeur.

The train enters Echo Canon, where the traveler looks on some of the wildest scenery in the world. Down goes the train thundering, dashing, winding and curving amid frowning battlements of rocks rising hundreds of feet above you. You plunge down a canon, seventeen miles in length, full of shadows and weird forms, walled in by rocks, which rise in rugged majesty, and of ever varying form and color, to inaccessible heights. Now, before you

is a projecting mountain, seemingly against which the train will be shattered to atoms, but a moment more you are passing under the mountain, in total darkness, stunned by the roar and din of the train, as it dashes onward, swiftly onward. Objects of wonder are met on every hand, but the speed of the train admits of but a hasty glance.

After passing "Castle Rocks," "Hanging Rock" comes into view; this overhangs its base for fifty feet; then "Jack-in-the-Pulpit Rock," the "Mormon Fortifications," "Steamboat Rock," "Sentinel Rock," "Monument," etc., till the train emerges from these scenes of terror into the sunlight, beauty and fertility of Weber valley—a transition as sudden as it is surprising and grateful.

This canon, says Wolfe, is memorable as the scene of Miles' Ride, one of the most exciting incidents in the history of railroading in the West. Miles had started from the upper part of the canon for Weber River, at its lower end, with a long train of cars, loaded with ties and iron rails. On his way, he discovered that the train had parted at a certain level place in the track, but now on the down grade again, the detached portion was thundering along behind with increasing and uncontrolled velocity, threatening a collision and the destruction of the entire train, with all in charge. Two Dutchmen were on the pursuing cars, but they were fast asleep, and did not hear the signal "down brakes," that came shrieking back through the canon. "Let on the steam!" shouted Miles to his engineer, and on rushed the train like the wind, mile after mile with destruction close in the wake, and gaining on them.

The next thing was to pitch off the ties, as they raced for life, with the hope of throwing the pursuing cars from the track. At last, meeting a tie or some other obstruction, they "flew the track" and bounded thirteen feet into a little creek. As soon as possible, the flying train was stopped, and the hands went back to pick up the dead Dutchmen, but found them sitting on a grassy spot, smoking their pipes and just beginning to realize, from the wreck around them, the dreadful peril through which they had passed.

Rushing on and down, the train reaches the Narrows, where the Mormons prepared to oppose the march of U. S. troops, under Gen. A. S. Johnston. Upon the tops of the precipitous cliffs, immense piles of stones of great size were collected with the intention of rolling them down upon the invading army, when in its march it should reach this defile. A most effective mode of destruction, copied from the example of the "Martyred Saints" of Switzerland. They were not used, however.

Just before leaving the canon, we notice "Bromley's Cathedral" and "Pulpit Rock." At the base of the mountains, and extending for some distance, the rocks assume the shape of spires, towers and domes, so as to convey, at a distance, a good idea of a grand cathedral.

A little further on, the train enters Weber Canon, which rivals Echo Canon in the number of its natural wonders, and the magnitude and wild grandeur of its precipitous rocks. Evidently the entire canon was at one time the bed of Weber River, which is still a clear, strong stream over the sinuosities, of

which the road passes again and again upon trestle-work, or avoids by means of tunnels, blasted out of the solid rock. The traveler will notice "Battlement Rocks," the "Witches," the "One thousand-mile-Tree," "Slate Cut" or "Photograph Rocks," the "Devil's Slide," etc. The latter curious formation consists of two parallel lines of immense slab rock, standing on edge, deeply imbedded in the mountain side, a few feet apart, of equal height, and traversing the mountain from summit to base.

The banks of the river in midsummer, are fringed with wild flowers of various kinds, the perfume of which fills the air and the railway coaches in passing.

Crossing the river again, with high mountains on both sides, we soon catch a glimpse of the snowy tops of the Wasatch range, and are out of the canon, and in an open level country. A little later we pass "Devil's Gate Mountain," crowned with snow. It is one of the most picturesque places on the route, presenting views entirely unlike all others hitherto obtained. At a place called the "Devil's Gate," the bridge is ninety-two feet in height. In the valley below are seen cultivated gardens, and also the old stage road, upon the bed of which the grass is springing.

Why the name of His Satanic majesty is so often used, is not quite clear. Whether he resides in the neighborhood or not, does not appear. There are a number of Mormon villages, not far away.

The train next arrives at Ogden. Our train having passed the desert, the scenery becomes more interesting as we proceed. We reach Wells, a small village situated at the northern terminus of

the Humboldt Mountains. These are among the highest, grandest mountains seen on the entire route, lifting their imperial heads high above their lowlier neighbors, crowned with the drapery of eternal winter, plowed with deep, dark gorges, forming a succession of smaller ranges, while the melting snow covers them with deep verdure of spring.

Passing around the mountains to the southwest, we enter the charming Humboldt Valley—eighty miles in length, with an average width of ten miles, with the Humboldt River, a beautiful little stream, traversing its entire length. The soil is a dark, rich loam, but owing to the shortness of the season, it is utterly useless for agricultural purposes.

The celebrated Hot Springs, rich mines of gold, silver, and sulphur—the latter so hard and pure as to require blasting, are found here.

Soon we arrive at Elko, a beautiful little town of 1,200 inhabitants. On Smith's creek in this county, there is a remarkable stratum of steatite, resting horizontally in a steep bluff of volcanic matter, which flanks the eastern side of Smith's creek valley. Steatite is a soft magnesian rock having a soapy feel, presenting grayish-green, brown and whitish shades of color. It is a variety of talc and consists of silica and magnesia. It forms extensive beds, and is quarried for fire-places and for coarse utensils. It is also called *pot stone*, *lard stone*, and *soap stone*. The stratum is from three to ten feet in diameter. It is easily worked and is a veritable soap mine. In fact, the farmers, cattle-men and sheep-herders, in that region all use the natural article for washing,—so it is said.



Passing numerous stations and objects of interest, we arrive at Reno, the county seat of Washoe county. It contains a population of 1,500. It was named in honor of Gen. Reno, who fell at the battle of South Mountain, and important as being the seat of the State Agricultural Society, the radiat-



VILLAGE ON CRESCENT LAKE.

ing centre of numerous stage lines, and the avenue to the greatest mining region in the known world. It is situated at the eastern slope of the Sierra Nevada Mountains.

Fields and orchards are seen, where ever we turn our eyes, while beautiful cypresses lift their graceful forms all about us. We have reached the base of

the great Sierra Nevadas. We look upon such scenery, as never elsewhere enraptured human vision: Gigantic mountains clothed with cypress, cedar and oak; enameled with flowers of delicate form and hues of rare beauty; sylvan streams, flowing down the mountain side, murmuring, dancing and sparkling as they leap from rock to rock, hurrying to the deep, blue sea.

As we gazed upon these grand, old mountains, Miller's beautiful poem came to mind:—

"The flight of time is underneath their untopped towers.
They seem to push aside the moon at night,
To jostle and unloose the stars. The flowers
Of heaven fall about their brows in shining showers.
They stand, a line of lifted, snowy isles,
High held above a tossed and tumbled sea—
A sea of-wood in wild, unmeasured miles;
I look far down the hollow days; I see
The bearded prophets, simple-souled and strong,
That fill the hills and thrill with song the herding throng.
They look as cold as Kings upon a throne;
The mantling wings of night are crushed and curled
As feathers curl. The elements are hurled
From off their bosoms, and are bidden go,
Like evil spirits, to an under-world.
They stretch from Cariboo to Mexico,
A line of battle-tents in everlasting snow."

These mountain peaks, for a distance of twenty or thirty miles, are lined with snow-sheds. The train slowly winds around Blue Canon. Four miles further, we are at Shady Run, from which point we have a full view of the Great American Canon—one of the grandest gorges in the world. Away to the left, may be seen the American River, winding its way like a silver thread, between two perpendicular walls two thousand feet in height; so one can stand on the

very brink of the crumbling cliff, and look down upon the foaming waters below. But the magnificent view is soon past.

Five miles more, and while we are gazing with rapture upon an ever varying scene, suddenly the great canon breaks again upon our view with increased and awful grandeur. Soon our train darts along the very verge of a fearful chasm, twenty-five hundred feet below us, with an almost perpendicular wall. Houses look like diminutive shanties, men like pigmies. From here the scenery though beautiful declines in interest. The train has arrived in California.

Nevada is a region of wonders. For diversity of its natural features and scenery, as well as for its vast mineral wealth, the country is alike interesting to the traveler and the scientist. Within its limits are the grandest mountain peaks and canons, lakes of surpassing beauty, cascades, rivers and valleys, dells and grottoes the most interesting, and the richest silver mining regions in the world. Throughout the State are numberless hot springs, some of which possess valuable medicinal properties. The sulphurous waters in the vicinity of Virginia City, known as "Steamboat Springs," rise to the height of several feet. The name is given from the peculiar sound of the spouting waters. In Carson valley, at the foot of the Sierras, less than a score of miles distant from Virginia, is Carson, the Capital of the State. It is so called in honor of the noted trapper, Kit Carson, whose extraordinary experiences are well known to the reader. This valley is the most extensive and fertile of any region in the State.

It is in delightful contrast with the barren and sterile regions which constitute the chief portions of the Territory.

We visited charming lake Tahoe, which reminded us vividly of Yellowstone Lake, in Wyoming's field of wonders. It is nearly as high—being a mile above the sea level—and no less interesting or beautiful. Crossing its placid surface for its whole extent, fully twenty miles, in the little steamer, we were struck with the wonderful transparency of its waters. Objects can be distinctly seen a hundred feet below the glassy surface. It is of variable depth; at some places the lead descends for twelve, and even fifteen hundred feet. The sunlight falling upon the surface, gives different tints to different depths, the shallow water appearing of greenish hue, while in greater depths the color deepens into blue. The black sandy shores furnish a setting in delightful contrast with the waters of the lake, which, with the dark-green pine and fir trees, valleys of rich verdure, lofty mountains with gigantic rocks, to which fancy gives a variety of names, and unpretentious hills adorned with evergreens, are all wonder-features that form a picture of rarest beauty—unsurpassed in any region of the world. It is the Lake Como of America; more beautiful than that liquid gem of Switzerland. Nevada and California share in the possession of this peerless lake. The State line extends across it.

There are many valleys, of small extent, in different parts of the State, that offer attractions to the ranchmen, as pasturage for their herds. The bunch grass and the seeds of the white sage—which ex-

tends all over the vast Territory—furnish the best of sustenance for the cattle. The sage pods, containing the seeds, open with the approach of winter. What may result from irrigation, in the future, remains to be seen, but Nevada will never be distinguished for its agriculture; the seasons are too short, the soil generally too sterile to warrant confident hope of grand results from farming industry. Mining is the great pursuit, and marvelous are, and long have been its results.

The great popular excitement, in 1849, over the wonderful discoveries in the county of Washoe, upon Frazer River, as well as in many places in California, are matters of history, well-known to the reader; but as great as was the occasion for such excitement, the later discoveries of silver have proved greater. The famous Comstock mine sent forth its many millions, and was the marvel of the world in 1866-7. It was then the richest lode in the world, but in that year grander discoveries were made in the region of the White Pine Mountains, 120 miles from Elko, Nevada, the nearest station on the great Pacific Railroad. The summit of the mountains which is covered with a heavy growth of white pine trees, is ten thousand feet above sea level. Sixteen miles to the east of this mountain, is Treasure Hill. In the autumn of 1867, the first mine—the “Hidden Treasure,” was discovered and opened, and a few weeks later, the “Eberhardt” was located, and operations begun, revealing the richest and most productive silver lode in the world.

The limits of this volume will not admit of a

statement in detail of the conditions of the great mines of Nevada or of California, nor is the statement necessary, for the facts are known to the world. True fissure silver mines can probably never be exhausted—surely not for centuries, and Nevada will ever continue its supremacy as the great “Silver State.”

What grand results, what advantages to Americans, especially, and to the world generally, have ensued as the consequence of the discoveries of the precious metals in this country! To appreciate the vastness of these results, the great benefit to mankind, we have only to compare the condition and resources of our country now, with those of a little more than a quarter of a century ago. The comparison, even without the aid of tabular statistics, will enable us to recognize and appreciate the wondrous changes that have thus been wrought, and lead to a consideration of the possible and probable good yet to ensue, from the same mighty influence. The prosperous and productive States which have sprung into being, and now form so important parts of the great Union, the facilities of communication and transportation, the vast addition to our trade and commerce, are grand results which, under ordinary circumstances, might have required centuries for their accomplishment and development, without the immediate and special causes, which hastened their occurrence.

Whether we view the agencies, which have achieved such marvelous ends, as the special providence of Heaven, designed to ennoble, magnify and perpetuate this nation, with its glorious institutions,

Or, the happy accidents of fortune, all will concede that the discoveries have proved of immense and far-reaching importance to the nation and the whole world; and that the treasures which have thus far been but lightly drawn upon, considering their incalculable or boundless extent, will, in the near future, work other results as grand in their conception, as wonderful in their execution, must be apparent to all thinking minds. The increase of our commerce in the Pacific, the facilities of communication with China, with Japan, and other parts of the world, as well as a greater unity of this country, in all its interests and benefits, are due, in a very great degree, to the discoveries of the rich mining regions of our western domains. In the results, which we now contemplate with pride and eminent satisfaction, we behold an earnest of other good, that must in the natural course of events, certainly and speedily follow. It requires no prophetic vision, no stretch of fancy, to foresee for the West, and hence for the whole nation, that other States with their grand resources will, ere the lapse of many years, glitter in the constellation of the Union, that new and important avenues of trade will be opened, other extensive lines of communication established connecting opulent cities—the boundaries of which have as yet neither been mapped, nor entered the busy brains that are evolving the grand problem of America's noblest ambition; new net-works of telegraph will flash new and startling announcements of still other and prolific sources of prosperity; regions as lovely as the Vale of Cashmere, are inviting the coming of the white

man; regions as lavish in wealth as those that have freely yielded their glittering treasures, invite his coming, and perhaps before another decade, this vision will become a reality, and the sound of the cannon in the East, rejoicing in the nation's anniversary will echo among the hills of now unpeopled regions of the West, and the national flag will wave over prosperous settlements and rising cities that are to be.

The mind can scarcely exaggerate the possibilities of the near future of this country, in reflecting upon the achievements which have been effected since the news of the gold discoveries in California first reached the ears of even Americans, who were poring over our maps, to find, if possible, the boundaries of the "Great American Desert," and the head waters of the Missouri, and wondering of what practical use and value to civilized man would be the wild lands of the Indian-peopled West; when Missouri and Illinois were the boundaries of civilization, and beyond their frontiers were only hunting-grounds of savages. Scarcely had the world ceased to wonder for the growth of California, when still more wonderful discoveries began in the great chain of mountains, and have continued to the present hour.

CHAPTER XXX.

California—Varieties of Climate—Beautiful Scenery—The wonders of the Yosemite.

It appears from the reports of the land office that California is eight hundred miles in length, and one hundred and ninety miles in breadth, and contains an area of 189,000 square miles; but another reliable authority places the area at 155,000 or 99,200,000 acres, of which forty millions may be regarded as agricultural land; the coast line extends eleven hundred miles. The State lies between the 32d and 42d degrees of latitude, and nearly the whole of it is west of the Sierra Nevada. No known region of the globe of equal extent comprises such numerous and marked divisions, volcanic peaks, rugged mountains, beautiful valleys, sterile regions, commodious bays, grand rivers and waterfalls, picturesque lakes, extensive marshes, broad prairies and stately forests, as are embraced within the boundaries of California.

Several authors have attempted to define the topography of the State, and among them J. S. Hittell, to whose comprehensive work upon the "Resources of California" the reader desiring to pursue the subject is especially referred. The State is distinguished for its vast mineral wealth, its superior commercial facilities, and its picturesque scenery. The many millions of dollars taken from the gold mines have affected the markets of labor and money

throughout the civilized world. Her mining and commercial history is well known to the reader.

My first visit to California was in 1849, when our facilities of travel were limited to individual locomotion, and a mule that would travel only when the inclination or incentive was strong to do so; the days when first-class hotels were constructed of cotton fabrics, and when all the world rushed hither to collect a few scattered millions, and return again to civilization to enjoy a life of luxury and ease. How patiently we climbed the rugged rocks of the Isthmus, and how bitterly we complained of the tardy and slow moving steamers, how we toiled, and how the millions we were to have gathered in a trice, eluded our grasp!

How very different now the conditions of country and people! Now content to let the millions go—our object is to see the glorious State, and to make a few pen pictures of what then we had no time to see—eyes and hands having all and more than they could do to gather up the millions.

The climate of California is conducive to health. In the valleys, it has the general character of that of Spain. Its winters are warmer, and its summers cooler, than in the Eastern States. There are different climates in the different parts of the State—one for the western slope of the Coast Range; one for the low lands of the Sacramento Basin; another for the Sierra Nevada and Klamath Basin; another for the Great Basin of Utah; another for the coast, south of Point Conception, and still another for the Colorado Desert. The sea breeze is a prominent feature in the general climate of California. In the

summer, its force is stronger than in the winter. It prevails in the day-time, and the land breeze comes in the summer nights. The climate of the State resembles that of Italy, in its general character, but has not its objectionable effect of depressing the mental or physical powers. In San Francisco, the average number of hot days in a year is only seven, and often in a series of years not a single hot day occurs. In twenty years, the number of cold nights, those in which the thermometer fell to thirty-two degrees, Fah., was but seventy-four. On an average there are 220 perfectly clear days in a year—days without a cloud, in the Sacramento Basin. New York has scarcely half as many clear days in any single year. The “rainy season” occurs between the first of November and first of June. It must not be supposed that the rain falls continually during the season; it does not fall at any other time, except in occasional light showers. In a year there is not more than half the rain-fall in inches in San Francisco that there is in Portland, Maine, or St. Louis; it is about half as great as in the States east of the Mississippi.

In the Sacramento valley there have been four floods in the last quarter of a century, and on an average two periods of drought to one flood. Dew seldom falls, and thunder storms in California are very rare; they are sometimes witnessed high up in the mountains and in the Great Basin, but rarely in any of the low land of the State. The climate of the coast is more equable and more conducive to health than that of Italy, Greece or Spain. Fruits, trees, cereals, etc., are unsurpassed, if indeed

equalled, in rapidity of healthful growth, elsewhere in the world.

Very much of the scenery of California is exquisitely beautiful. The peculiar clearness of the atmosphere gives a great range to vision. It has been well said that "the mountainous character of the State, not only prevents monotony and secures a rich variety of landscapes, but gives them extent and grandeur. The large rivers, the high snow-peaks and ridges, wide bays, forests of the largest and most graceful evergreens, parks of majestic oaks, natural meadows covered in the Spring with brilliant grasses and flowers, are all magnificent." The low lands are mostly bare of timber, with here and there a grove of oaks and lines of trees and bushes along the water courses. The coast valleys are very beautiful.

The distinguishing features of the country, to which all travelers turn most eagerly for sight-seeing, are the Yosemite, the Big Tree Groves, the Geysers, the Petrified Forest, Mt. Diablo, Mt. St. Helena, Mt. Talmapais, Mt. Shasta, the California Alps, Clear Lake and Lake Tahoe—the latter we have already briefly described.

The Yosemite Valley and Falls are of astonishing grandeur and sublimity. The whole region is of the wildest and most picturesque character. The following excellent description of its wonders is given by Richardson, in his work, "Beyond the Mississippi."

"After four days' hard travel from San Francisco, we galloped out of the pine woods, dismounted, stood upon the rocky precipice of Inspiration Point,

and looked down into Yosemite as one from a house-top looks down into his garden, or as he would view the interior of some stupendous, roofless cathedral, from the top of one of its towering walls. In the distance, across the gorge, were snow-streaked mountains. Right under us was the narrow, winding basin of meadow, grove and shining river, shut in by granite walls, from two thousand to five thousand feet high,—walls with immense turrets of bare rock,—walls so upright and perfect, that an expert crag-man can climb out of the valley at only three or four points.

Flinging a pebble from the rock upon which we stood, and looking over the brink, I saw it fall more than half-a mile before striking. Glancing across the narrow, profound chasm, I surveyed an unbroken, seamless wall of granite, two-thirds of a mile high, and *more* than perpendicular—the top projecting one hundred and fifty feet over the base. Turning toward the upper end of the valley, I beheld a half-dome of rock, one mile high, and on its summit a solitary, gigantic cedar, appearing like the merest twig. Originally a vast granite mountain, it was riven from top to bottom by some ancient convulsion, which cleft assunder the everlasting hills, and rent the great globe itself.

The measureless, inclosing walls, with these leading towers and many other turrets—gray, brown and white rock, darkly veined from summit to base with streaks and ribbons of falling water,—hills, almost upright, yet studded with tenacious firs and cedars; and the deep-down level floor of grass, with its thread of river and pigmy trees, all burst upon me

at once. Nature had lifted her curtain to reveal the vast and the infinite. It elicited no adjectives, no exclamations. With bewildering sense of divine power and human littleness, I could only gaze in silence, till the view strained my brain and pained my eyes, compelling me to turn away and rest from its oppressive magnitude.

Riding for two hours, down, down, among sharp rocks and dizzy zigzags, where the five ladies of our party found it difficult to keep in their saddles, and narrowly escaped pitching over their horses' heads, we were in the valley, entering by the Mariposa trail. The length of the valley or cleft is nine miles; its average width three-fourths of a mile.

Up the valley for five miles, past Bridal Veil Fall, runs the Merced, fresh from the Sierras. Delightful and exhilarating, though a little chilly, for the swimmer, it is so perfectly transparent as to cheat the eye, and beguile beyond his depth, any one attempting to wade it. Crossing it by a rustic log bridge, we are in a smooth, level meadow of tall grass, variegated with myriads of wild-flowers, including prim roses of yellow and crimson, and a lily-shaped blossom of exquisite purple, known as the Ithuriel Spear.

The meadow is fringed with groves of pines and spreading oak, and on one side bounded by the everlasting walls. The pines, like those of Washington Territory, are simply height, slenderness, symmetry. The delicate tracery of the branch is beautiful beyond description; but the trunk is comparatively small. I procured a photograph of two, wonderfully regular and graceful, and more than

two hundred feet high, which dwarfed to a child's block-house, a large frame-dwelling at their feet. In the evening, illuminated and softened by the full moon, the beauty of the valley was marvelous. The bright lights of the distant house shone through the deep pines, and the river's low gurgling, faintly disturbed the air. At times immense boulders, breaking from the summits, rolled down thundering, and filling the valley with their loud reverberations.

The rock mountains are the great feature; indeed, *they* are Yosemite. The nine granite walls which range in altitude from three to six thousand feet, are the most striking examples on the globe of the masonry of Nature. Their dimensions are so vast that they utterly outrun our ordinary standards of comparison. One might as well be told of a wall, upright, like the side of a house for ten thousand miles, as for two-thirds of one mile.

Cathedral rocks have two turrets, and look like some Titanic religious pile. Sentinel towers alone, grand and hoary. The South Dome, a mile high, is really a semi-dome. Cleft from top to bottom, one-half of it went on the other side of the chasm and disappeared, when the great mountains were rent in twain. The gigantic North Dome is as round and perfect as the cupola of the National Capitol. 'Three Brothers' is a triple-pointed mass of solid granite. All these rocks, and scores of lesser ones, which would be noticeable any where else in the world, exhibit vegetation. Hardy cedars, thrusting roots into imperceptible crevices of their upright sides—apparently growing out of un-

broken stone—have braved a thousand years, the battle and the breeze.

El Capitain is grandest of all. No tuft of beard shades or fringes its closely shaven face. No tenacious vine, even, can fasten its tendrils, to climb that smooth, seamless, stupendous wall. There it will stand, grandeur, massiveness, indestructibility, till the heavens shall pass away with a great noise, and the elements melt with fervent heat. Its Indian name is *Tu-toch-ah-nu-lah*. Both this and the Spanish word signify "the leader;" but were applied in the sense of the Supreme Being. It ought to be called Mount Abraham Lincoln.

One noble mountain most appropriately commemorates Thomas Starr King.

Hutchings' affords a perfect view of Yosemite Falls, a mile distant. In April and May, when melting snows swell the stream to a deep torrent, they are grand; but then the valley is half flooded. In late summer their creek shrinks to a skeleton; and they look small because their surroundings are so vast. Niagara itself would dwarf beside the rocks in this valley.

Yet Yosemite is the loftiest water-fall in the world. Think of a cataract, or cascade, of half-a mile with only a single break! It is sixteen times higher than Niagara. Twelve Bunker Hill monuments standing upright, one upon another, would barely reach its summit. Ossa upon Pelion becomes a tame and meaningless comparison.

We did not climb to the rapids and foot of the Upper Fall; that is difficult, hazardous and exhausting. Nor did we go to the extreme summit; that

requires a circuitous ride of twenty-five miles out of the valley. But we spent much time at the base of the Lower Fall, shut in by towering walls of dark granite. The basin abounds in rocks—some as large as a dwelling house—which have fallen from the top. Spreading my blankets upon one of these, almost under the fall, I found it a smooth bed, though a little damp from spray; and spent the night there to see the cataract in the varying illuminations and shadows of sunlight, twilight, starlight, and moonlight.

Much of the water turns to mist before reaching the bottom; yet looking up from under it, the volume seems great. Six hundred feet above, a body of ragged, snowy foam with dishevelled tresses, rushes over the brink, and comes swinging down in slender column, swayed to and fro by the wind like a long strand of lace. For four hundred feet the descent is unruffled; then, striking a broad, inclining rock, like a roof of a house, the water spreads over it—a thin, shining, transparent apron, fringed with delicate gauze—and glides swiftly to the bottom. By moonlight the whole looks like a long white ribbon, hanging against the brown wall, with its lower end widening and unraveled.

Bridal Veil Fall, unbroken, much narrower, and softened by a delicate mist which half hides it, is a strip of white fluttering foam, which the wind swings like a silken pendulum. It is spanned by a rainbow; and at some points the thin, glass-like sheet reveals every hue of the wall behind it. Before reaching the end of its long descent, a rill no longer, it is completely transformed to spray—the Niobe of cascades dissolved in tears.

Above Hutchings' the valley breaks into three canons, and the Merced into three Forks. North Fork passes through Mirror Lake—the very soul of transparency. It reflects grass, trees, rocks, mountains and sky with such perfect and startling vividness that one cannot believe them images and shadows. He fancies the world turned upside down, and shrinks back from the lake, lest he should tumble over the edge into the inverted dome of blue sky.

On the Middle or main Fork is Vernal Fall, difficult of access. Leaving our horses three miles from the hotel, we climbed for two weary hours along dizzy shelves and up sharp rocks, where the trail rises one thousand feet to the mile;—pine woods all around us; at our left and far below, the river chafing and roaring in its stony bed. Then we stood at the foot of Vernal Fall. Bridal Veil and Yosemite are on little lateral creeks; Vernal is the full, swelling torrent of the Merced. Those creep softly and slowly down, as if in pain and hesitation. This rushes eagerly over gloomy brown rocks; then leaps headlong for more than three hundred feet, roaring like a miniature Niagara.

Rainbows of dazzling brightness shine at its base. Others of the party reported many; my own eyes, defective as to colors, beheld only two. But afterward, when alone, I saw what, to Hebrew prophet, had been a vision of heaven, or the visible presence of the Almighty. It was the round rainbow—the complete circle. In the afternoon sun I stood upon a rock a hundred feet from the base of the fall, and nearly on a level with it. There were two brilliant

rainbows of usual form—the crescent, the bow proper. But while I looked, the two horns of the inner or lower crescent suddenly lengthened, extending on each side to my feet—an entire circle, perfect as a finger-ring. In two or three seconds it passed away, shrinking to the first dimensions. Ten minutes later it formed again; and again as suddenly disappeared. Every sharp gust of wind showering the spray over me, revealed for a moment, the round rainbow. Completely drenched, I stood for an hour-and-a-half; and saw, fully twenty times, that dazzling circle of violet and gold, on a ground-work of wet dark rock, gay dripping flowers and vivid grass. I never looked upon any other scene in nature so beautiful and impressive.

Climbing a high rock wall, by crazy wooden ladders, we continued up the canon for three-quarters-of-a-mile to Nevada Fall, where the Merced tumbles seven hundred feet, in white and swaying mistiness! Near the bottom it strikes an inclined rock, and spreads upon it in a sheet of floating silver tissue a hundred and thirty feet wide.

Passing over a wide, gaping creek, or chasm in this rocky grade, the thin sheet of water breaks into delicate, snowy net-work; then into myriads of shining beads, and finally into long sparkling threads—an exquisite silken fringe to the great white curtain.

These names are peculiarly fitting. Bridal Veil indeed, looks like a veil of lace. In summer, when Bridal Veil and Yosemite dwarf, Vernal still pours its ample torrent. And Nevada is always white as a snow-drift.



The Yosemite is height; the Vernal is volume; the Bridal Veil is softness; but the Nevada is height, volume and softness combined. South Park Cata-ract, most inaccessible of all, we did not visit. In spring, each fall has twenty times as much water as in summer.

On the whole, Yosemite is incomparably the most wonderful feature of our continent. European travelers agree that transatlantic scenery has nothing at all approaching it. Unless the Himalayas hide some rival, there is no spot, the wide world over, of such varied beauty and measureless grandeur.

Climbing out of the valley, we cast one longing, lingering look behind, from Inspiration Point. Here is the best comprehensive view, not of separate features, but of the whole. This vast open Cathedral, which would hold fifty millions of worshippers, is true to the ancient imperious maxim of architecture: its mean width, about equals the average height of its walls. Our eyes, now adjusted to its distances and dimensions, were no longer pained by the amazing spectacle. At last we turned away from this sublimest page in all the book of nature. I think few can come from its study without hearts more humble and reverent, lives more worthy and loyal.

Yosemite Valley is four thousand feet above sea-level. After climbing out and re-passing Inspiration Point, we still ascend; and then ride for several miles, at an altitude of about eight thousand feet. Here, where snow is sometimes twenty feet deep, are meadows of richest grass and brightest flowers.

The pyramidal, slender pine abounds, frequently two hundred feet high, its trunk and branches gorgeous with yellow moss. So does the exquisite, blue-tipped, silvery-fir. This profuse vegetation, with lark-spur, daisy, lily, honey suckle and godola, is at a height which, in New England would frost-kill tree, flower, grass and twig.



CHAPTER XXXI.

Big Tree Groves—Geysers—Petrified Forests—Sublime Mountain Scenery—Lakes of Rarest Beauty—Natural Bridges—Cascades—Canons—Gorgeous Flowers—Indians—Former Races of Men—Wild Animals, etc.

Various theories are entertained concerning the formation of the Yosemite Valley; the one generally accepted being that offered by Prof. Whitney, viz: that the surface of the region "sank, owing to its support being withdrawn from underneath, during some of those convulsive movements, which must have attended the upheaval of so extensive and elevated a chain."

There is a similar but smaller valley on the Tuolumne River, twelve miles further north. It is three miles long, half-a-mile wide, and is bounded by granite cliffs, which rise from 1,500 to 2,500 feet in height. Above this wonderful valley, the canon extends a distance of thirty miles into the mountains, with vertical walls and remarkable scenery, including several high cascades. On the south of Mt. Whitney, King's River forms a grand canon, more than a mile in depth and ten miles in length, with a level bottom, in one place half-a-mile in width.

In Calaveras, Tuolumne, Mariposa and two other counties, there are groves of gigantic trees, called Sequoias. The one in Calaveras County contains one hundred and fifty trees, ninety of which are more than fifteen feet in diameter, and ten rather more than thirty feet.

One of the trees, which has fallen, must have been four hundred and fifty feet high and forty feet in diameter. Through the hollow trunk, a man can ride on horseback, seventy-five feet. In 1854, one of the largest of these forest giants—ninety-two feet in circumference—was cut down. Since then the surface of the stump has been used occasionally by dancing parties, for theatrical performances, etc. An examination of its rings showed that it was about two thousand years old. The largest trees seem to have been broken at the top by snow, which often falls upon the Sierra Nevada to a great depth—sometimes of nearly twenty feet. The State Grove, in Mariposa County, fifteen miles south of the Yosemite, the largest and finest grove of all, has been given by the National Government to California for a public pleasure resort. It has 427 trees, of which one hundred and thirty-four are over fifteen feet in diameter, eighteen over twenty-five and three over thirty-three feet.

The cones of the mammoth pine-trees are cylindrical, and sometimes nearly two feet in length. Those of the Big trees are round and not larger than apples. Seedlings from them are growing in every country of Europe. They are numerous in English parks. Two hundred have been planted in Central Park, New York. Through this State, as well as in Oregon, gigantic redwood trees are very numerous, and on the summit of the Sierras, almost a mile above sea level, grow sugar pines, ten and twelve feet in diameter.

The big tree—Sequoia—though not taller than some of the trees of Australia, is the largest vegeta-

ble production on the globe. It is supposed to have generally attained a height of 350 feet, and to be at least thirty-five feet in diameter. It is indigenous only on the western slope of the Sierra Nevada, between the 36th and 38th degree of latitude, at elevations from 3,000 to 5,000 feet above the sea.

In California, trees flourish at an elevation of 11,000 feet; two species thrive 1,000 feet above the snow-line, and five species that reach a diameter of three feet grow in places where the temperature is below the freezing point almost the entire year. The snow-plant is frequently found below the snow line, but looks prettiest when its brilliant red tints appear amidst the snowy mantle.

Mt. Diablo, thirty miles east of San Francisco, is an isolated cone, 3,856 feet in height, in the midst of a fertile and populous country. It overlooks San Francisco, Santa Clara, Sacramento, and many other notable localities, and commands a view of the Sierra Nevada for a distance of 250 miles, and of an area of forty thousand square miles, equal to the entire State of New York. There is probably no point on the earth's surface from which so vast an extent of country can be seen, as from this mountain. Mt. Shasta, at the north, and Mt. San Bernardino, at the south, occupy positions of similar prominence. Shasta, 7,000 feet in height, is mantled with snow, most of the year, for a vertical mile from the summit, and is a sublime feature of the landscape. It is visible in any direction for a hundred miles. In the Sierra Nevada, between the 35th and 38th degrees of latitude, there are one hundred peaks that rise above 10,000 feet, and one

that reaches fourteen thousand nine hundred feet.

The geysers are among the wonders of California. Down the western slope of the mountains which separate Clear Lake from the basin of Russian River, is Pluton River, near which, at an elevation of seventeen hundred feet above sea level, are the geysers—numerous hot and cold, quiet and boiling springs are seen within a few feet of each other—the waters differing widely in color, odor and taste. There is an orifice of about eight inches in the side of the hill, from which rises a large volume of steam to a height of from fifty to over two hundred feet. The noise of the escaping steam is almost deafening. The “Devil’s Punch Bowl” is a large hole six feet across, in the side of the hill. The dark liquid in this bowl is always boiling with heat, and the vapor deposits black flowers of sulphur in the vicinity.

In the ridge separating Napa from Santa Rosa, and five miles west of Calistoga, are from twenty to thirty petrified trees, prostrate upon the ground. To this group has been given the name “Petrified Forest.” Besides these remarkable petrifications, others are also found at intervals on the ridge, nearly down to the bay. The largest is five feet in diameter and about fifteen feet in length. No branches have been found, nor more than twenty feet of the trunk of a single tree. The petrification is complete; the woody fibre has entirely disappeared, and has been replaced by grayish stone—seemingly, carbonate of lime, in which the grain of the timber is distinctly preserved. All the stone trunks are broken transversely, the breaks having occurred, evidently in the stony condition.

The rock of the ridge is a volcanic sandstone. The trees were redwood, of the species still growing in the same region. Another similar "petrified forest" is found in the valley of Cedar Creek, in the northeastern part of the State.

There are many cascades besides those of the wonderful valleys already described. "There is a cataract about five hundred feet high on Fall River, which flows into the Middle Fork of Feather River; one of three hundred and eighty feet, where the South Fork of the American River flows down over a convex rock, looking like a streak of snow when seen from a distance; one of sixty-feet in the San Antonio River, Calaveras County; another of seventy-five feet on the same stream, which falls fourteen hundred feet within a mile; and one of three hundred feet, called the "Rifle-box Falls," in Deer Creek, Nevada County."

There are five natural bridges in the State, all of which are interesting to tourists. The largest of these is on a small creek which empties into the Hay Fork of the Trinity River; a ledge of rock 300 feet wide crosses the valley. Below this rock, the creek flows through an arch twenty feet high by eighty across. The rock above the arch is one hundred and fifty feet deep. On Lost River there are two natural bridges, about thirty feet apart. Each is from ten to fifteen feet wide and about eighty feet long. One of these is used by travelers. On Coyote Creek, in Tuolumne County are two natural bridges half a mile apart. These are 285 feet long, thirty-six feet high.

Of the caves in California, which, by the way, are

not very numerous, the "Alabaster," seven miles from Auburn, in Placer County, is the most noted. It has two chambers, the larger of which is about two hundred feet long, and about half as wide. It contains many very beautiful stalactites and stalagmites. The "Cave of Skulls," in Calaveras County, when first discovered contained a great number of human skulls and bones, all incrusting in carbonate or sulphate of lime. These bones are now in the Smithsonian Institute.

The mirage is often seen in some parts of California. "All the phenomena of this illusion," says Prof. Blake, "are exhibited on a grand scale upon the Colorado Desert. Mountain ranges, so far distant as to be below the horizon, are made to rise into view in distorted and changing outlines. Inverted images of smaller objects, and apparent lakes of clear water, are often seen, and invite the traveler to turn aside for refreshment. The first exhibition of a mirage that was seen by our party, was from the margin of the plain at Carriso Creek, looking toward the Gila, about ninety miles distant. It was early in the morning, and the eastern sky had that golden hue which precedes the rising sun. Tall, blue columns, and the spires of churches and overhanging precipices seemed to stand upon the verge of the plain. These outlines were changing gradually, and, as the sun rose higher, they were slowly dissipated. After reaching Fort Yuma, and witnessing the strangely precipitous and pinnacled outline of the mountains beyond, it was at once apparent that the mirage consisted of their distorted images. When we were upon the northern part of

the desert, the peak of Signal Mountain was often distorted and raised above the horizon. The points of distant ranges also seemed at times to be elevated above the surface precisely as the headlands of a coast sometimes appear to rise above the water at sea.

The plants, birds, quadrupeds and fishes of California are in many essential respects quite unlike those of other countries. In vegetation, California more closely resembles Southern Europe, than the States and Territories of the Mississippi valley. The species of trees and plants are comparatively few in number. The valleys and low hills abound in wild flowers, but nearly all bloom within a brief period. The forests are more frequently found on the mountains, and near the ocean, north of thirty-six degrees of latitude. The general barrenness of the hills is always remarked by travelers. Most of the valleys south of the 35th degree of latitude are treeless. The Sierra Nevada and the Western slope of the coast range have heavy forests, the timber being spruce, pine and fir. In some sections are found the redwood, laurel, arbor vitæ, madrona, evergreen oak and other varieties.

Among the various plants, there is one known as the *amole*, or soap-plant, the root of which, when rubbed in water, makes a lather. It was extensively used for washing by the Indians and Spanish Californians prior to the American conquest. The wild oat grows on hill and plain, and furnishes a large part of the wild pasture of the State. It is never threshed, but is excellent sustenance for cattle. The white California clover has a large yellowish-

white bloom, from an inch to an inch and a half in diameter, and is a beautiful plant as an ornament for gardens. In some situations, where the earth is moist, it grows to the height of two feet. California is perhaps the best grape country in the world. The grape region extends six hundred miles north and south, between latitude 32 and 41 degrees, with an average breadth of one hundred miles. Hittell says: "The grape vine supposed to be the largest in the world, grows at Montecito, near Santa Barbara. It is of the Los Angeles variety, was planted in 1795, has a trunk 15 inches in diameter, and its branches are supported by an arbor 115 feet long and 78 feet wide. It has in a favorable year, borne four tons of grapes. It is, however, beginning to lose its vigor."

There are a great variety and abundance of wild flowers in California, and they have different seasons for blooming; and in canons, where the soil is always moist, flowers may be seen every month in the year.

In March, the grass of a valley may be hidden under red, in April under blue, and in May under yellow bloom. Grace Greenwood says of the flowers in May:—"The grand California flower show is at its height. Anything more gorgeously beautiful than the display in meadows and wild pasture land, on hill side and river side, it were impossible for any one but a mad florist to imagine. Along the railroads on either hand runs continuously the rich, radiant bloom. Your sight becomes pained, your very brain bewildered by watching the galloping rainbow. There are great fields, in which flowers

of many sorts are mingled in a perfect carnival of color: then come exclusive family gatherings, where the blues, the crimsons or the purples have it all their own way: and every now and then you come upon great tracts, resplendent with the most royally gorgeous of all wild flowers, the yellow or orange poppy—the golden cup.' Every such tract where the sumptuous blossoms stand thick, reminds one of the 'Field of the cloth of gold.' They are peculiarly joyous looking flowers massed together, dancing and hob-nobbing, and lifting their golden goblets to be filled by the morning sun." The grass continues green till June, when it begins to change to a yellowish brown. The drought is fatal to the grass, and when the prairies of Indiana and Illinois are covered with snow, the valleys of California are dressed in brilliant verdure.

"The azaleas of California are abundant and rich in perfume: a species of *calycanthus* without fragrance, is found in the canons, and the *ceanothus* or California lilac, of which there are many species, is a beautiful evergreen shrub, growing about ten feet high, with clusters of lilac-like flowers of various shades of blue, violet and red, according to the species. The tree produces a multitude of little twigs and a dense foliage and may be trimmed into almost any shape.

In the southern parts of the State, and in the Colorado Desert, many varieties of cactus grow. The largest is the *candelabrum* which attains a height of fifty feet, and often has from two to six branches, half as thick as the trunk. These run out horizontally a foot or two, then turning at a

right angle, rise vertically parallel with the main stem. The cactus is prized by the Indians for its abundant moisture, although its fruit is insipid. Several species of palm grow in the Colorado and Mojave Deserts, and one bears an edible date, but this is seldom found. Desert vegetation includes also the bayonet-tree, the mesquit-tree and the maguey or American aloe; the latter grows to the height of fifty feet.

The ocean near the shore from the Golden Gate southward, has a great variety of seaweeds, some of which are very beautiful.

In past ages, the northern part of California was the scene of great volcanic activity. Many of the lava beds of the Sierra Nevada are prominent features of the landscape. About Mt. Shasta, there are immense deposits of volcanic matter, and geologists maintain that at least ten thousand feet of the elevation of that peak is of volcanic origin. It is believed that Mt. St.



Helena is also an extinct volcano. Clear Lake, which is twenty miles long, was doubtless the crater of a volcano, and it is reasonable to believe that the geysers derive their heat from deep internal fires. California has numerous dead rivers or channels, in which once flowed large streams of water, but now filled with gravel; in these river beds, large quantities of gold have been discovered.

There are a great number of artesian wells in the State. In that part of Santa Clara County where water can be obtained by boring, there are no less than three hundred wells of a depth varying from fifty to four hundred feet. The water so obtained is used for irrigation and for manufacturing purposes. It is believed that the supply comes from subterranean streams, for the wells throw up living fish and crustacea of various kinds; some of the wells discharge eyeless fish, similar to those found in Mammoth Cave, Kentucky. The deeper the well, the warmer the water. Experiments have shown that living fish thrown up from shallow wells quickly die, if put into wells of greater depth than those from whence they came, in consequence, perhaps, of a difference of temperature in the waters of the wells.

The antedeluvian animals of California were wholly distinct from animals of the present day. The hills and mountains contain the bones of the mastodon, elephant, rhinoceros, hippopotamus, horse, camel, whale, and a quadruped resembling a tapir. Oyster shells, fifteen inches in length, are found near Corral Hollow, and Oyster Peak near Mt. Diablo is named for its fossils. The climate of

California was probably tropical in the era of these extinct races; then the valleys were vast swamps and the mountains were clothed with a luxuriance of vegetation peculiar to the torrid zone.

Many evidences exist warranting the opinion that the region was inhabited by human beings many thousands of years ago. In a little town in Calaveras County, the skull of a man was found under four successive strata of lava, at a depth of 131 feet from the surface, in a miner's shaft. The first stratum was of black lava, forty feet deep; then gravel three feet; light lava thirty feet; gravel five feet, and in alternate strata of lava and gravel. The most careful investigation of the facts fully sustains the truth of the discovery. Prof. Blake, of San Francisco, reported to the Academy of Sciences in 1873, the discovery of artificial stone ornaments, etc., near San Francisco, indicating the existence of men in the Pliocene era. In 1859, the skeleton of a man was found, sixteen feet deep in the earth, in Los Angeles County. In 1855, two stone mortars, such as were used by the Indians for grinding acorns and grass seeds, were found near Diamond Springs, Eldorado County, at a depth of one hundred feet below the surface. In 1854, the skeletons of two men were found at Rattlesnake Bar, fourteen feet below the surface, and under ancient strata which had apparently not been disturbed from the time of their deposition.

I have spoken of the salubrity of the climate of the State; but there are certain meteorological conditions, now and then occurring in various places, which should also be mentioned. Cases are

on record of a sirocco, or burning hot wind, visiting the coast. On Friday, June 17, 1859, one was felt at the town of Santa Barbara. That day will be long remembered by the inhabitants, from the burning, blasting heat experienced, and the effects thereof. Indeed, it is said that for the period of thirty years, nothing in comparison had been felt in this country. The sun rose like a ball of fire, on that day; but, though quite warm, no inconvenience was caused thereby until 2 o'clock P. M., when, suddenly, a blast of heated air swept through the streets, followed quickly by others; and shortly afterwards the atmosphere became so intensely heated that no human being could withstand its force; all sought their dwellings and had to shut doors and windows and remain for hours confined to their houses. The effect of such intense and unparalleled heat was demonstrated by the death of many animals and birds. The trees were all blasted, and the fruit, such as pears and apples, literally roasted on the trees, and the same as if they had been cast on live coals. But, strange to say, they were only burned on one side—the direction whence came the wind. All kinds of metal became so heated, that for hours nothing of the kind could be touched with the naked hands. The thermometer rose to nearly fever heat, in the shade.

Near an open door, and during the prevalence of this properly-called sirocco, the streets were filled with impenetrable clouds of fine dust or pulverized clay. Whatever the cause of the phenomenon, we see its terrible effects all around us in blighted trees, ruined gardens, blasted fruit, and almost a

general destruction of the vegetable kingdom here. A fisherman who was out at sea, came back with his arms all blistered." A similar occurrence of a hot wind six days later, in Stanislaus County, was reported by the Stockton journals. They mention its fatal effects upon horses and other animals, and say that at a public house, birds flew into the bar-room for shelter, so tame had they suddenly become. Birds, in great numbers, fell dead from the trees as if they had been shot; the while the thermometer was 113 degrees in the shade.

In the Colorado Desert, and in some other districts in the southern part of the State, sandstorms similar to the simoons of Africa, but not so dangerous, occasionally occur. A Journalist thus speaks of one—"A huge, black cloud rising from the western horizon, warns the traveler of its approach. Rapidly it spreads over the sky, darkens the sun, and the fine particles of sand are swept before the gale in a dense and suffocating cloud; even the large gravel and pebbles are sometimes lifted from the plain and carried like hail before the force of the blast. The horses are blinded, paralyzed with fear, and no urging can induce them to go forward; and to go on would be folly; the road and sun are hid from view; no land-marks are visible by which to be guided. The only course is to wait until the storm has passed, which will be, doubtless, in from six to ten hours."

In every city, in every town and village throughout California, so far as our observation extended—and our stay was for several months for the sole purpose of observation—the inhabitants evince the

most remarkable enterprise and perseverance. In many places, they have triumphed over apparently insurmountable obstacles and barriers to progress, and have accomplished wonders in every department of industry and art. A more hospitable and noble people does not exist. The citizens of San Francisco, especially seem to combine the distinguishing characteristics of Chicago, St. Louis, Cincinnati and New York.

Eminently enterprising without rashness, prompt in execution, and with taste and culture nowhere excelled, the people of San Francisco have built one of the most attractive and every way delightful cities in this country, and with lavish hand have established all sorts of humanitarian institutions; and commensurate with their notable liberality in every worthy cause, they have prospered abundantly from the earliest period of the history of the city to the present hour. The probity, integrity, enterprise and sound judgment of the commercial and mercantile houses of this and every large California city have given them a reputation the world over. The elegance of private residences, the magnificence of business establishments and emporiums of trade, the activity, industry, thrift and prosperity which characterize every department of business, in the leading cities of the State, are all matters which invite the observation and elicit the highest admiration of all visitors, who are cosmopolitan enough to discriminate intelligently and just enough to pronounce fairly upon them.

A quarter of a century ago, the Indians of California numbered fifty thousand or more, but now

scarcely one-tenth of the number remain. They have been robbed, driven away or killed by the white men. At the time of the first discovery of gold in California, nearly every little valley had its tribe, and there were scores of tribes in the Sacramento Basin and elsewhere in the State, but most of these bands have been destroyed—have fallen by whiskey and bullets of the white settlers. The California Indians, with the exception of the Mojaves, are supposed to belong to the Shoshone Nation. They are physically and mentally inferior to their relatives in Nevada, and vastly inferior to the Indians, who lived a century ago east of the Mississippi. Until within a comparatively recent period, the California Indians knew nothing of the use of fire-arms, but now they are generally expert enough with them. The Indian men are about five feet and a half high, and the women little below five feet. Both men and women, are large in body, but slim in limbs, as compared with the white race. They wear but very little clothing, and are exceedingly filthy in their habits. The tribes are small, and have no wealth and no laws. Their rule is blood for blood. They have no marriage ceremony, and squaws who wish to remain mistresses of the wigwam, or rather slaves of the lord, are always upon their good behavior, and soundly beaten if they conduct ill. Their children are few, and mostly boys. They have no religious ceremonies.

The wild Indians have no permanent place of residence. Each tribe has a territory, and each family a wigwam or rancheria; these are usually on the banks of streams, in the vicinity of oak-trees, horse-

chestnut bushes and patches of wild clover, upon the product of which in part they subsist. Such places generally have a picturesque scenery. They consist of acorns, clover, grass seed, grass hoppers, horse-chestnuts, fish, game, pine nuts, edible roots and berries. The acorns, which are very large, are collected by the squaws, who grind them and boil them into a paste or bake them into bread. The oven, a hole in the ground, is heated by hot stones. The bread is not very inviting in looks or in taste. The Indians use no utensils in the preparation of their food, beyond a mortar and water proof basket, and eat without knives or other conveniences except their fingers. With the exception of one or two tribes in the Colorado Desert, the wild Indians never tilled the soil. They are very familiar with the habits of wild animals. Hittell tells us, that they know precisely the character of the brushwood and ravines, in which the deer and bear hide during the day, and the places to which they go to feed in the morning and evening. In hunting deer and antelope in places where there is grass, the Indian will sometimes hold the skull and horns of a buck deer before him, and thus crawl within bow or gun shot.

The Pit River Indians dig pits and cover them with brush and grass, and thus catch deer, hares and other game. They often use nets for catching water fowl. Salmon are speared. The bow and arrow, spear net, glass or obsidian knife, mortar and basket are the only tools made by the Indian. Such were some of the habits and customs of the red men twenty years ago, but by contact with white men, they have modified their wild habits, and in many instances adopted worse ones.

The largest and most formidable of the quadrupeds of California is the grizzly bear. When fully grown he is four feet high, seven feet long, and when fat, weighs two thousand pounds, though generally he does not weigh over one thousand, being the largest of the carnivorous animals. His body is light grayish brown; about the ears and on the back and legs dark brown; the hair is long, coarse and wiry, and stiff on the neck and shoulders. California was once infested with grizzlies, but they are now more seldom found. He lurks in the chaparral or bushes, whereas the black bear prefers the heavy forest. It is not an easy thing to kill a grizzly with a single bullet, and no expert hunter will fire upon one when the bear is lying down. His thick and coarse hair is almost as good as a shield or the hide of the rhinoceros, and even when supposed to be mortally wounded, he will make a long and vigorous fight. His wound infuriates him and he becomes a terrible enemy, as his speed is almost equal to that of a horse.

I recall an instance in which Barstow fired upon a grizzly at good range, and the bullet entered the animal's breast, but instead of dying as it was supposed he would, he dashed down toward Mr. Barstow with great fury, and that gentleman was obliged to run at all speed to escape, and even then he would have been overtaken, but seeing a tall and slender pine tree near at hand, he hastily climbed up. The bear approached the tree, and reached up as far as possible, standing upon his hind legs, and failing to reach his enemy he waited for more than an hour, watching, and growling, and then deliberately walked away.

It sometimes, indeed often occurs, that hunters are killed by these ferocious beasts; but the animal seldom or never makes the first attack. Usually he will move off if he sees a man approaching, but wounded, he never retreats. The dam will attack any person who comes near her cubs. The grizzly generally feeds upon vegetables, roots and herbage, but is very fond of fresh pork, which, by the way his own flesh greatly resembles in taste. He is quiet during the day, but goes abroad at night, in quest of food. The cub of the grizzly is easily tamed and can be trained with as great facility as a Newfoundland dog.

Among the wild animals of California are several species of bear, the cougar, wild-cat, gray wolf, coyote, foxes, badger, raccoon, opossum, mountain cat, porcupine, rabbits, deer, antelope, mountain sheep, seal, sea otter, sea lion, beaver and squirrels. Here we find the golden and bald eagles, hawks, vultures and a great variety of birds of plumage and of song.

In California as in all the States and Territories west of the Mississippi, we find many thousands of immigrants coming from all parts of the world. Canada sends many thousands to California, Kansas, Nebraska, Dakota, and indeed to every region offering extraordinary inducements to settlers; so too does England and all the countries of Europe, so does China, and while each and all are helping to develop our resources, some races are proving more serviceable than others. With our present knowledge derived from observation, it is not an easy thing to say what races will exert the greatest influence upon the destiny of the nation.

The race problem in this country, is far more difficult to solve than in England; indeed, an accurate solution is manifestly impossible until a sufficient time shall have elapsed to give that oneness to our population which it necessarily lacks at the present time. We are not yet one people, we are many peoples, and all that can be done in a brief examination of our nationality, present and prospective, is to judge from the leading characteristics of the many, what the one will be when it arrives. The wonderful variety of races to be found in the American Republic is an additional and far more important difficulty. No nation has ever drawn supplies of humanity from such widely diverse sources. Egypt, at the height of her renown, was only a close corporation, composed of the tribes inhabiting the lower valley of the Nile. Greece prided herself upon the practical exclusion of "outside barbarians." Rome, when the foundations of her future empire were laid, was merely a concentration and organization of the rude popular forces of Southern Italy. England is the common stock of only five roots—omitting the Romans from the calculation, as they were never in any sense fixed to British soil.

In New York, Chicago, San Francisco, Boston, New Orleans or St. Louis, one may meet in a single day's walk through the streets the representatives of more distinct races of men than make up the combined nationalities of Egypt, Greece, Rome and England. America is literally the home of all nations. The vast extent of our territory with its many millions of acres unreclaimed from prim-

itive condition, and consequent cheapness of land; our democratic form of government, the opportunities offered for the acquisition of wealth, and the fascination which always attaches to a new country, all unite to stimulate immigration from the four quarters of the globe. Asia, Africa and Europe contribute to the growth of America, and are severally largely represented in our fifty millions of people. Chinese, Negroes, Hebrews, Russians, Germans, Italians, Swiss, French, Dutch, Scandinavians, Poles, Spanish, Portugese, Irish, Scotch, Welch, English, South Sea Islanders, Mexicans, South Americans meet here on the neutral ground and are working together for the formation of the one people, which in the near or remote future shall embrace the ruling qualities of all. Hence we find a very marked diversity of character and progress throughout the country, from the highest culture and refinement down to the lowest condition recognized as civilization, the various nationalities severally exerting their influence upon entire communities and sections, to so great an extent that a traveler could scarcely, at all times, believe himself to be in the same country in passing from State to State.

Looking over this list of nationalities, which might be made even longer than it is, we may put our fingers upon several families that are not likely to enter largely into the united American family to come hereafter. Neither the Asiatic nor the African, can exercise any permanent influence in the moulding of the national character. Their presence among us bring some good and some evil,—it is not needful to balance the account,—but they have

neither the intellectual nor the moral elements to make an indelible mark. They are now, and perhaps always must be foreigners; with us, but not always of us; coloring, to a certain extent, our legislation, language and habits of thought; affecting more or less our industry and finance, hindering or helping our general development, but accomplishing nothing of an enduring nature,—nothing which three or five hundred years hence will be sufficiently visible to permit the tracing back to an African or Asiatic origin. The America of the 22d century of the Christian Era, will be purely American only in its name and physical geography. It will be Europe passed through the American crucible. The most healthy and vigorous European races will have been melted together into an Americanized race—a race whose European blood and brain will be stamped with innumerable peculiarities derived from American soil, climate, scenery and institutions.

The foundation for this unity of races will undoubtedly be English, for while we have shaken off the political yoke of the mother country, the language, the literature and best political ideas of England must always hold us nearer to the English type than to any other. The descendants of the Puritans and Cavaliers who first settled Massachusetts and Virginia cannot rid themselves of the ancestral chain which binds them to the grand little Island across the sea, and no revolution in politics, in society or religion, can entirely obliterate the impression made upon national manners, and thought by the strongly marked men, who

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left home and friends to plant the seeds of English civilization and culture in the American wilderness. Accepting the English as the fundamental type of the future nationality, what other races will probably compose the predominating part of the superstructure? The statistics of immigration furnish an answer to this interesting question.

Ireland and Germany send us the most re-inforcements, and the Irish and German character has already infused itself in the American to a much greater extent than is commonly supposed. There are more Irish in America to-day, than in Ireland, and there are portions of America, as German as Germany; and while it is true that the Irish born in Ireland, and the Germans born in Germany, are what is called "clannish," we have only to study their children to see that the clannishness is not permanent. It wears off rapidly in the second generation, and is scarcely perceptible in the third. In other words, the grandson of a German or Irish immigrant is, to all intents and purposes, an American,—not precisely the same sort of an American as the man of Anglo-Saxon lineage, but resembling him more closely than he does the Anglo-Saxon. Twenty generations cannot extinguish all the race instincts and ideas, but enough of them are removed in the second and third to foreshadow the inevitable result. It may then be safely predicted that when the amalgamation is consummated, and the unity of races an established fact, we shall have a race of Americans, in which the eye of the careful observer may detect the sturdy virtues brought from England, the thrifty economy and plain com-

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mon sense brought from Germany, and the chivalrous courage, the poetic imagination, the matchless wit, and invincible good nature brought from Ireland. All these blended into one, and that one tinted as it must be by contact with races, smaller in number and less distinct than the dominant three, will certainly produce a nationality unlike any the world has yet seen, and in very many respects superior to any now existing. If the American Republic be true to itself, what a magnificent destiny awaits it!



CHAPTER XXXII.

Across the Country to Arizona—Natural Features of the Country—The Great Rivers—Wonderful Canons—Ancient Ruins—Climate—Various Indian Tribes—Mining Regions—The Future of Arizona.

Taking passage on a steamer at San Francisco, we arrived, after a delightful voyage, at the little town of San Diego, on the extreme southern coast of California, which, whatever its attractiveness to others, was to us only a point of departure across the State by stage to Arizona City, a distance of eighty miles, as reported in the time table, but to us it was interminably long and wearisome, although I give the driver credit for making his seven miles an hour, as required by the mail service to do. We would have preferred to make the entire passage from San Francisco to the mouth of the Colorado River in one of the steamers of the line connecting with the steamboats that ply upon that majestic and rapid stream, but this was inexpedient for us; and, as all things have an end, so did our wearisome stage ride terminate at last, and we found ourselves in the great Territory of Arizona, the chief points of interest of which we proposed to visit, so far as it might be possible to do in the brief period to which our travel in this region was limited.

Arizona lies between latitude 31 and 37 north, and longitude 109 and 115 west. It is bounded on the north by Nevada and Utah, east by New Mexico, west by California and Nevada, and south by Sonora, Mexico. This vast region is 700 miles long,

with an average width of 140 miles, and contains an area of seventy-three million acres. Arizona was Mexican Territory, and peopled only by Indians until 1853, when it was acquired by the United States; ten years later, a territorial form of government was organized.

The word "Arizona" is derived from the Aztec, and signifies "Silver-bearing"—a most appropriate name, in view of the vast wealth of the silver mines of the Territory. The mountain ranges generally run northeast and southwest; the Magollon Mountains and a chain extending into New Mexico run from east to west. The highest peak in Arizona is the San Francisco, which rises to the height of 11,000 feet.

In the middle and northeast parts of the Territory, there are plateaus of vast extent, having an elevation varying from three thousand to seven thousand-five hundred feet above the sea. These regions are diversified by volcanic cones and hills. In the north, a plateau, or *mesa*, as it is called, extends into Utah. South of the Gila River, the plain is but little above sea level. The Territory of Arizona has never been fully explored, and but comparatively a small part of it has been surveyed. It embraces three of the largest rivers on the continent, west of the Mississippi—the Rio Grande, Gila and Colorado.

The Colorado River is formed by the union of the Green and Grand Rivers, in the southern part of Utah; it runs in a southerly direction for more than five hundred miles, along the western border of Arizona, receiving in its course the Chiquito, Diamond

and Gila, and many other tributaries of less importance. In the north, the Colorado rushes through rocky and precipitous canons, the walls of which in many places, rise perpendicularly to the terrible height of six or seven thousand feet.

The Colorado is navigable from Callville to the Gulf of California, a distance of over six hundred miles. The San Carlos, Salado, San Pedro and Santa Cruz—all small rivers—are tributary to the Gila, which unites with the Colorado 180 miles from the sea.

Col. Emery, who has explored a large portion of the Territory, says: "The wide belt of country that borders the Black Forest, and probably extends along the Rio Verde to the Salinas and Gila, bears every indication of being able to support a large agricultural and pastoral population. The valley of the Rio Verde is magnificently wooded with firs and oaks, affording excellent timber. Ancient ruins are said by trappers to be scattered over its whole length to the confluence with the Salinas. We therefore seem to have skirted the boundary of a country once populous, and worthy of becoming so again. Besides the advantages already enumerated, the mountains in this vicinity bear indications of mineral wealth."

The country east of the Rio Grande is a great plain, broken only by the Sacramento and Guadeloupe Mountains. The sun never shone on a fairer grazing country than upon the three hundred miles west of the Rio Grande. The traveler has before him throughout the entire distance a luxuriant growth of grass the nutritious qualities of which are unsurpassed, and the stock-raiser has the satisfac-

tion of seeing his cattle in January, as fat as those that are stall fed in the east. Ninety miles west of the Rio Grande is the Mimbres River and Valley. Still following the emigrant and mail road for a distance of fifty miles, brings us to the capital—the old Mexican town of Tucson and the valley of Santa Cruz.

Like most of the streams, the Santa Cruz is intermittent,—sinking and rising at irregular intervals. A portion of this valley is covered with a heavy growth of cottonwood. The mountains in the vicinity contain pine and oak, and the extensive tracts of grazing lands south to the Mexican line, are covered thickly with the mesquit, which makes excellent fuel. The whole region between the Rio Grande and the Santa Cruz is broken with conical shaped hills and mountains, called by the Mexicans *pelloncillos*. At the foot of these hills are found springs which afforded water to the immense herds of cattle and horses which once covered the country; and at many of these springs are found the ruins of buildings occupied by the herders. The hills are clothed to the top with the gramma and other nutritious grasses.

Twenty miles east of the Sonoita Valley, and just north of the town of Santa Cruz, is one of the richest silver regions of Arizona. The Wachupe Mountain, it is believed, contains an inexhaustible supply of silver.

The valley of the Colorado is fertile, and will produce all the tropical fruits as well as the cereals. The Indians, favored by the annual overflow of the river, raise abundant crops of grains and vegeta-

bles. The remains of extensive irrigating canals show that at some time, long since gone by, a large agricultural population lived here, but who these people were is a mystery, which perhaps may never be solved. The soil of the Colorado bottom is well adapted to the growth of rice, sugar and cotton. This is the only portion of the Territory where the heat is excessive. Along the river banks there is a fine growth of cottonwood, and the whole valley abounds with the mesquit.

The valley of the Gila River,—the waters of which flow from East to West, dividing the Territory nearly in the centre—is four hundred miles long, and for the greater part, is suitable for tillage.

The valleys of the uplands and the alluvial bottom lands of the southern section are quite fertile, and wherever irrigation can be obtained the land yields largely. The products are those of the temperate zone. In the middle valleys, two crops a year are often raised, but until some system of irrigation shall be adopted, the productive area will necessarily be limited. There is much arable land in the eastern and central sections and on the hill sides of the northeast. Along the streams, walnut, cottonwood, cherry, ash, willow and other forest trees are plentiful; on the mountains are forests of oak, pine and cedar. Since 1876 the number of cattle and sheep has increased four fold, and stock-raising will ere long become an important business.

The climate of Arizona is mild and salubrious. The atmosphere is remarkably dry, with very little rainfall. Snow sometimes falls upon the mountains and central portion of the Territory, but remains for

only a few hours. At Fort Yuma, near Arizona City, the average temperature during the winter months is 58 degrees Fah., in spring 65, in summer 89, and in autumn 80. In June, July and August, the mercury sometimes reaches 112 degrees. Like all elevated table land, the entire region is free from malarial diseases.

The first explorations of the country were made by the Spaniards in the first half of the sixteenth century, and the numerous ruins which have been discovered prove that the valley of the Gila was highly cultivated and extensively peopled. The ruins of aqueducts, canals and houses of large size, with walls of solid masonry, show that the inhabitants must have attained a degree of civilization, though not as high as was reached by the Aztecs or the native races of Central America. But they have left no records of their history, and our sole knowledge of them is derived from the ruins of their buildings and towns.

"Many portions of Arizona are covered with ruins, which prove conclusively that it was once densely populated by a people far in advance, in point of civilization, of most of the Indian tribes. There is no written record of them, and it is only a matter of conjecture who and what they were. Occasionally a deserted house is found sufficiently well preserved to ascertain the character of the architecture. The walls of the Casa Grande, situated on the Gila, near Sanford, are still two stories above the ground. In size, the structure is about thirty by sixty feet; the walls are thick, and made of mud, which was evidently confined and dried as

it was built. It is divided into many small rooms, and the partitions are also made of mud. The floors were made by placing sticks close together and covering them with cement. Around and near the Casa Grande, are the ruins of many other buildings; but, by the lapse of time, the decay of vegetation has formed earth and nearly covered them, and all that now marks the place where once a stately mansion stood, is the elevation of the ground. Near the Ancha Mountains are ruins not so extensive, but in far better preservation than the Casa Grande; and near these ruins are old arastras, for the reduction of silver ore—which indicate that this old people were not unmindful of the root of all evil. On the Verde River are immense rooms dug in from the sides of high, perpendicular sandstone banks, that can only be reached with ladders.

Very little information is obtained by excavating these ruins. Pottery, of an excellent quality, and ornamented with paint, is found everywhere, and occasionally a stone axe is unearthed, but nothing to indicate that they were a warlike people; on the contrary, scarcely an implement of defense can be found, though there are reasons to believe, from the numerous lookouts, or places for observation to be seen on the tops of hills and mountains, and the construction of their houses, that they had enemies, and that they were constantly on the alert to avoid surprise; and, also, that by the hands of these enemies they perished. It is not improbable that the Apaches were the enemies who caused their destruction. Indeed, the Apaches have a legend that such is the case. During the year 1878, Commis-



sioner Safford opened an old ruin at Pueblo Viejo, on the Upper Gila, and found the bones of several human beings within; also the bones of a number of domestic animals. On the fire, an *olla*, crockery-ware vessel, was found with the bones of a fowl in it, and it appeared as though the people who occupied the premises, had resisted an attack from an enemy, and had finally been murdered. Shortly after he visited a ruin in Chino Valley, twenty miles north of Prescott, and over three hundred miles from Pueblo Viejo, and there found that a resident had opened a ruin on his farm. In it he found the bones of several human beings—five adults and several children, and the evidence was unmistakable that the inmates had died by violence, as the door and window had been walled up with stone, evidently to resist a hostile foe. The subject is an interesting one, and it is to be hoped that further excavations may throw more light upon it.

The ruins of towns, farms and irrigating canals that are to be seen on every hand through this vast Territory, give abundant proof that this country was once densely inhabited, and that the people who lived here maintained themselves by cultivating the soil. Probably that is about all we shall ever know of them. Many hieroglyphics are to be seen on rocks in different portions of the Territory, but by whom made, or what they mean, no one knows.

"In excavating a well between Tucson and the Gila, at the depth of one hundred and fifty feet, pottery and other articles, the same as found in the vicinity of ruins, were taken out."

"On making particular inquiries respecting the ruins," says John D. Hall, "I find that they are common in all parts of the Sonora River region, and even on the river Gila. The river Sonora, from its length, quantity of water, and abundance of cultivable land, is peculiarly adapted to maintain a large population. Many of the ruins are of great extent, covering whole table lands, proving that in former times Sonora was much more thickly peopled than at present. Undoubtedly some regularity was observed in laying out these towns.

In one I found what appeared to have been a fort; by its position it was well calculated for defence. Unfortunately, no documents exist, from which dates could be taken, the archives, and all belonging to the mission, having been destroyed at the time the Jesuits were expelled. It is a known fact here, that the order of Jesuits have done more towards civilization among the Indians, than any other religious order in existence."

The tradition is current here, and in all parts of the Opata Nation, that the great Montezuma was the chief of their tribe, and a great warrior. After subjecting the other tribes to his rule, he determined on building himself a city to live in, on the river Gila—in Casas Blancas. He commenced operations: not liking the situation, or being somewhat disturbed in his work by the Apaches—the only tribe, which had not submitted to his rule, joined to the bad omens observed by the priests—he determined to travel in search of a good location, favored by his gods. At the time of commencing his new journey, an eagle was observed to be hovering over the camp;

orders were given to observe the bird's flight, and its resting place ascertained; his commands were obeyed implicitly, and the eagle was found in the lake of Mexico, perched on an opal, with a rattle snake in its beak. Here, Montezuma founded the city of Mexico, which would have remained in his possession up to the present date, if Hernan Cortez and his gallant adventurers had not disturbed his calculations in a most important manner. Such is the tradition, and it is considered heresy among the Opatas not to believe it. Eagle, snake and opal is the escutcheon of Mexico.

Humboldt mentions in his travels having seen the ruins of Casa Blanca on the river Gila. Another tradition is current also of Montezuma having told the conquerors of Mexico, that it would be an easy matter for them to subject to their rule the whole of the Indian tribes, but the Apaches never."

These ruins are found in various parts of the Territory and throughout New Mexico, and all seem to have been the works of the same people, and to have been constructed in or about the same period.

Near the salt lakes, a hundred miles southeast of Santa Fe, are the ruins of an extensive town or city. The explorer there finds an aqueduct twelve miles in length, the walls of buildings, traces of streets, and other features of interest, landmarks of a past age. It may have been a Spanish silver mining town. Ruins in Navajoe County include the remains of some very large buildings, in which explorers have found traces of more than a hundred separate rooms on the ground floor of a single house.

Nearly three hundred years ago, Spanish missionaries found, in New Mexico, half-civilized Indians who raised cotton, manufactured cloth, and lived in towns with regular streets, squares and dwellings, like those of the present Pueblos.

“Dr. J. S. Newberry, of the United States army, found remarkable ruins of old Pueblos of the San Juan River, then in New Mexico, now in the southwest corner of Colorado. One of these deserted human bee-hives was inclosed by sand-stone walls, five hundred feet long, twelve inches thick, and thirty feet high. The marks on the few timbers, still preserved, and implements found in the vicinity, indicate that logs and rocks were split and hewn with tools of hard stone or obsidian. The huge edifice, six stories high, was divided into small rooms, very evenly plastered with gypsum.

The San Juan valley contains many of these ruins, which have been deserted from three hundred to five hundred years. Once it swarmed with the busy life of half a million of people, now it has no human being. Dr. Newberry inquired the reason of this from an old and intelligent Pueblo chief, who replied that at the invasion by Cortez, Montezuma made such heavy drafts upon the able bodied men of the province as to leave old men, women and children, unable to defend themselves from the surrounding Utes, Apaches and Navajoes, and compelled the entire population to emigrate southward. This theory is supported by the fact that the most ancient Pueblos, which were built in mountain fastnesses easily defensible against numbers and valor, are still inhabited, while those in the open country are deserted.”

The history of Arizona is a constant record of border warfare. The Pimas and Maricopas Indians occupy a fertile tract on the Gila, and are brave and hospitable; they live in villages and cultivate the soil with great success. The Apache Indians, on the contrary are a blood thirsty tribe, who wander from place to place without any fixed habitation, and are continually at war with other tribes, when not otherwise engaged in pillage and murder of white men. In the Territory there are 20,792 Indians in tribal relations, and occupying reservations covering three million acres. The principal tribes are the Pimas, Papagoes, Mojaves, Yumas, Maricopas and Apaches. The white population of the Territory does not exceed thirty thousand.

There are few railroads in Arizona. The means of communication at present is by wagon roads, which lead to every important town. The South Pacific Railroad connecting at Lathrop, California, with the main line of the Central Pacific Road, extends from Goshén, south to Yuma, 637 miles from Lathrop, where it crosses the Colorado River and enters Arizona, thence it runs east through the valley of the Gila. Between Keene and Girard, 260 miles from Lathrop is the "Loop"—the only instance in railroad construction of a road crossing itself.

Arizona has a good system of public schools considering the vast area and scattered population. There are four newspapers published in the Territory. The large majority of the people are Catholics, but the Methodists and other denominations have a few churches in the principal towns.

Tucson the capital, is in the Santa Cruz Valley, 300 miles east of Arizona City, on the overland from San Diego, California, to Santa Fe, New Mexico. Although a very old city its population does not exceed 3,500. It has been a town of some importance, for about a century. The Mexican government had a military post here, and it is now the principal place for the exchange of commodities between Arizona and Sonora. The people of that country, bring grain, fruits, tobacco and other products, and exchange them for goods and money. The Territorial library is in Tucson. The majority of the inhabitants are Mexican, and the Spanish language is spoken by nearly all.

Prescott, formerly the capital, is 155 miles east of the Colorado. It is the county seat of the county, and headquarters for the military department of Arizona. It contains a population of two thousand.

Arizona City, situated at the confluence of the Gila and Colorado, is the county seat of Yuma County, and has a population of 1,600. It is the principal depot of supplies for southern Arizona.

Ehrenburg, 140 miles above Arizona City, on the Colorado, is a new and thriving town, and the chief shipping point for the central section of the Territory.

Florence, Sanford, Mineral Park, Hardyville and Wickenburg, are also deserving of mention. The Territory is very rich in all the precious and most of the useful metals, but the want of facilities for transportation has prevented the development of the mining interests. In Central Arizona gold is found, and both, there and in the south, the moun-

tains contain rich lodes of gold, silver, copper and lead. Silver is found in the form of galena and sulphurets, and copper chiefly in gray sulphurets, carbonates and oxide of iron, platinum and quicksilver may be found in abundance, but for lack of capital comparatively little mining has been done.

Immense deposits of salt of purest quality, gypsum, lime and some small beds of coal are worked.

The prospects for mining have never before been so encouraging as at the present time, and new discoveries of valuable silver lodes are constantly being made. With the construction of railroads and suppression of Indian troubles, capital will flow into Arizona, and soon this vast country, now almost unknown, will develop into one of the richest mining districts in the world. Semi-official statistics for 1878, show that the value of gold and silver bullion in that year from the mines of Arizona was \$2,287,983.

A correspondent, writing from this great Territory, says: "Arizona is to-day, in embryo the great mining empire of the Pacific. I cannot detail in a letter the mines that produce their millions, but they are many. The railroads are coming from the west and east. Their rate of progress is three miles a day; one on the Santa Fe, Atchison and Topeka line, and two on the S. P. R. R. The gap will soon be closed. St. Louis will be the great commercial city, with which we shall have direct dealings. Arizona will score \$6,000,000 in bullion, as its product for 1880.

New Mexico is one of the largest and most populous of the Territories. It is situated between the

31st and 37th parallels of north latitude, and the 103d and 109th west longitude; it has a length of from three hundred and fifty to three hundred and ninety miles, and a breadth of three hundred and thirty-five miles, and contains 121,000 square miles. The general surface consists of high level plateaus, traversed by ranges of mountains, between which are many wide and fertile valleys; there are many isolated mountain peaks of great height in several parts of the Territory. The chief river is the Rio Grande del Norte, which flows through the centre.

The Pecos flows south through the eastern division, and unites with the Rio Grande in Texas. The northeast is drained by the Canadian, and the northwest by the San Juan River, while the Gila and Chiquito Colorado have their origin in the southwest. The valley of the Rio Grande has an elevation of between 5,000 and 6,000 feet, near the northern boundary, and of about 3,000 feet at El Paso. On each side of the valley of the Rio Grande and Pecos, the mountains have a general altitude of 6,000 to 8,000 feet, while some rise far above the snow line, which in this latitude, is situated at an elevation of about ten thousand feet. Most of the mountains and streams have a general direction north and south. The Rocky Mountains are here divided into two ranges, of which the eastern contains the highest peaks, and extends to within a few miles of Santa Fe. South of this range, a lofty plateau extends between the Rio Grande and Pecos, broken, however, by numerous smaller ranges. In the west, the great range of the Sierra Madre extends into Mexico. The country west of this is less known

than the eastern region, but is believed to be fertile, and to contain great mineral wealth, as yet entirely undeveloped. It consists of numerous and extensive table lands or *mesas*, with detached ranges of mountains, enclosing many beautiful valleys. In the extreme southeast is the Llano Estacado, or Staked Plain, which covers many thousand square miles, and extends a considerable distance into Texas. This consists of an elevated tract, destitute of wood, and almost entirely unproductive. With this exception, the land, where susceptible of irrigation, is generally valuable for agriculture and grazing. There are no fresh-water lakes of any importance, but salt lakes, or *salinas*, are abundant, particularly between the Rio Grande and the Pecos, south of Santa Fe, and from these, large supplies of salt are obtained for the use of the Territory, and adjacent provinces of Mexico.

The great differences in latitude and elevation give rise to wide variations in the climate of the Territory. The atmosphere is clear and dry, and pulmonary and miasmatic complaints are scarcely known, the proportion of deaths from consumption being smaller than in any State or Territory, with the exception of Arizona. In the mountains the winters are sometimes severe; on the plateaus and in the river valleys, especially of the South, they are remarkably mild, the temperature seldom falling below the freezing point. In this locality the rainy season is in July and August. The annual rainfall varies from ten to thirty inches, according to location. The mean annual temperature at Santa Fe, at an elevation of nearly 7,000 feet, is 50 degrees

Fah.; that of spring, 49 degrees, summer, 70 degrees, autumn, 50 degrees, winter, 31 degrees Fah. The highest temperature recorded was 88 degrees, the lowest, 50 degrees. The summers are long and warm, but extreme heat is rarely experienced, owing to the elevated position of the country and frequent breezes.

There is no room for doubt as to the suitability of New Mexico for stock-raising on an extensive scale, the pasturage being abundant, while mesquite or gramma grass preserves its nutritive properties through the winter. Frosts being almost entirely unknown, cattle require no shelter, and the climate is even more favorable for sheep husbandry, which forms one of the chief industries.

The valley of the Rio Pecos and Rio Grande, and of a number of the smaller streams are very productive. The rainfall being small, artificial irrigation is necessary, and many canals have been constructed. Corn, wheat, barley and oats, are the principal crops, and fruits of all kinds flourish, the grape being especially luxuriant. The mountain sides bear heavy forests of pine, cedar, spruce, and other coniferous trees, while oak, walnut, sycamore and cottonwood are plentiful in the South.

Aside from the products of her mines, the exports of New Mexico are small, and the manufactures are principally confined to such articles of prime necessity, as flour, sawed lumber and the like. Some of the water power afforded by the rapid running rivers has been utilized for manufacturing purposes, but until the Territory is opened up by railroads, the development of the manufacturing

and commercial interests of New Mexico must necessarily be slow.

The population is estimated at about 120,000, there being 92,000 at the Federal census of 1870. This is exclusive of the tribal Indians, of whom there were in 1874, over 25,000, principally Navajos, Utes and Apaches. The Pueblos, numbering 9,000, occupy nineteen villages, or "pueblos" in the northwest. They have been decided to be citizens of the United States, but under the Territorial laws are not allowed to vote. They live in towns built of stone or adobe, and are widely scattered over the Territory. They are an honest, plodding people, and are nearly always independent of government in respect to material aid. They raise all the products of the country, including fruit, and also give much attention to flocks and herds. The progress made in educating these Indians during the last year, has been very satisfactory. The Spanish language is spoken by a majority of the people, most of whom are of Mexican descent. The government is similar to that of other Territories. A free public school system was inaugurated in 1871, and has since been extended throughout the Territory. There are 160 Catholic churches and a few Protestant organizations, and twelve newspapers are published. Taxation is light, and there is no Territorial debt.

Santa Fe, the capital and most important city, is situated on the banks of Santa Fe Creek, an affluent of the Rio Grande, and is about 275 miles south by west of Denver, Colorado. It is one of the oldest towns on the American continent, and when first

visited by the Spaniards, in 1542, was a populous Indian pueblo. The exact date of the first Spanish settlement has not been preserved, but Santa Fe became the capital of New Mexico in 1640. It was captured and partially destroyed by the Indians in 1680, and retaken by the Spaniards fourteen years later. In 1837, another attack was made by the Indians, who were repulsed with great loss, and in 1846, the United States troops occupied it. During the Civil War, the Confederate forces took the city, but were forced to evacuate it after an occupancy of thirty days. At present, it consists of a number of irregularly built streets of adobe houses, mostly of one story only. The principal business houses are grouped round the public square, where also is the old "Palace," containing the Legislative Hall, Court rooms, and the Governor's mansion. The population is about 5,000, of whom four-fifths are of Spanish and Mexican origin, and speak the Spanish language. There is an old cathedral of peculiar architecture, and a new one has been constructed in connection with this. A few Protestant denominations maintain missions here. There is a telegraphic communication with Denver, and stage lines run daily to Trinidad and Las Animas, and to the more important towns of Arizona. Santa Fe is the centre of supplies for a very large district, and a large trade is carried on.

The most pressing need of New Mexico at this time is railroads. With much fertile soil and immense mineral wealth, the growth of the Territory has been retarded by the lack of means of access and inter-communication. It is believed that before

long, this want will be supplied, and the country opened up by several lines of railroad.

The chief mineral wealth of this rich Territory is contained in its gold and silver mines, some of which have been worked since remote times. The earliest Spanish discoverers found such convincing proofs of the richness of the gold and silver deposits, that they gave to the country its present name, from the resemblance to the mineral regions of old Mexico. Throughout the periods of the Spanish and Mexican occupancy, the precious metals were worked, and even with the rude appliances and desultory methods of those peoples, wonderful results were obtained.

The chief gold fields now operated are those of Colfax, Grant, Santa Fe and Bernallilo Counties, and of the Carrizo, Sierra Blanca, Patos, Jicarilla and Magdalena Mountains, but these are only a few of the many regions in which gold is known to exist. So far, little more than the placers have been touched, while the great resources of the quartz lodes still await the advent of machinery, capital, and, above all, well-directed labor. The census of 1870 returned seventeen gold mines, of which five were quartz lodes, with an invested capital of over \$2,380,000.

Having visited every State and Territory west of the Mississippi, the object of our expedition was accomplished; and from Santa Fe we returned to St. Louis. Although we had travelled over many thousands of miles, by every means of conveyance, and had experienced the fatigue, exposure and privations incident to so long a journey, not one of the company had suffered from illness for a day.

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Surely there is no prophylactic against physical ills so effective as pure air and plain regimen. At St. Louis, our party separated, with mutual regrets,—our English friends returning to Europe, carrying with them notes and sketches which may in time reach many American readers, and with the conviction in which we all concur that Uncle Sam's farm is somewhat extensive—and rather more so than the general public suppose.

"I hear the tread of pioneers,
Of nations yet to be,
The first low wash of waves, where soon
Shall roll a human sea.
The elements of empire here
Are plastic yet and warm,
And the chaos of a mighty world
Is rounding into form;
Each rude and jostling fragment soon
Its fitting place shall find
The raw material of a State,
Its muscles and its mind."



CHAPTER XXXIII.

Alaska—Its Extent—Climate—Sitka—The Yukon River—A “Yosemite Valley” in Alaska—A Wonderful Region—Grand and Beautiful Scenery—The Grand Canon—A Magnificent View—The Largest Glacier on the Globe—Description of the Various Parts of the Territory—Intense Heat in Summer—Luxuriant Vegetation—Forests—Gorgeous Flowers—Aborigines of North America—Manners, Customs, and Traditions of the Natives of Alaska.

Thirteen years ago the United States purchased of Russia, the vast region in the northwest, designated upon our old maps as “Russian Possessions,” and upon those of later construction, as Alaska, paying therefor the sum of seven million two hundred thousand dollars. It was thought by many—perhaps the majority of the people of the Union—that Secretary Seward had paid enormously dear for the Territory of “frozen land and glaciers, intermingled with numberless volcanoes and hot springs,” for the cold, bleak and barren region would be of little value to the country. But it appears, as the result of the most careful exploration and investigation, that the popular supposition is erroneous. The sole purpose for which the Russians ever explored the Territory, was to obtain furs, and, that in this, they were successful, will appear from the fact that the fur trade alone, of Alaska, is now worth the sum of one million dollars annually. During the last nine years, the United States government has received, for the rental of the Seal Islands—St. George and St. Paul—the sum of two and a half million dollars. These islands furnish

the world with the greater portion of its supply of furs. There is no reason why Alaska, comprising more than half a million square miles, may not become densely populated with a hardy and intelligent people.

The Territory of Alaska is bounded on the north by the Arctic Ocean, on the east by the Hudson Bay Territory, and on the south and west by the Pacific Ocean, Behring Sea and Strait. Its general climate is not unlike that of England, and much warmer than might be supposed, in view, only, of its high latitude, owing, perhaps, to the warm ocean stream—like the Gulf Stream of the Atlantic—the influence of which is felt along the entire northwest coast of America. It appears from thermometrical observations, taken at Sitka for the last forty-five years, that its winter climate is no more severe than that of Ohio or Kentucky. Only four times within the forty-five years did the mercury fall below zero, and the severest cold was only four below. In Minnesota, it is not unusual in winter, for the mercury to sink ten or fifteen below zero.

At Sitka, such vegetables as require, in our latitude, only a part of the summer to reach maturity, flourish. The smaller fruits and berries mature and ripen. The region about Sitka, and especially south of that town, abounds in dense forests of large trees.

Sitka was formerly the capital of the Russian colonies in America; here, the Governor had his residence. It is by no means a large town, but on the contrary, is very small, containing not over two hundred buildings; the Governor's house, the Greek church and the large store houses being especially



noticeable. The houses are chiefly built of logs, and painted a dull yellow; the metal roofs are red; hence the town presents a quaint but picturesque appearance, when viewed from the harbor, being wholly unlike any other on the continent. The moisture of the climate renders Sitka a disagreeable locality for a residence. The numerous little islands, with which the bay is studded, are clothed with forests, which extend to the water's edge.

The Presbyterian Church of this country, and the Canadian Methodists, have established Missions at Sitka and Fort Wrangell.

The greater part of Alaska is further south than either Norway or Sweden, and Sitka is in the latitude of Aberdeen, Scotland. The Aleutian Islands—a part of Alaska—extend southward into the Pacific more than a thousand miles, the southern islands of the archipelago being about the latitude of London.

The Pacific watershed of Alaska, is much smaller than that of Behring Sea. The mountains approach closely to the sea shore, and the water of the rivers is collected far inland, and forces its way to the sea through a narrow pass or perpendicular canon. Upon these lofty summits much of the rain-fall is congealed, and as a glacier torrent, reaches the sea by slow degrees.

The head waters of the Yukon River were known to the traders and trappers of the Hudson Bay territory early in this century. In 1837, a Russian explored the delta of the Yukon, and ascended the river as far as the mouth of the Anvic River. Ten years later, Mr. Murray descended the Porcupine

and founded the trading post of Fort Yukon. The river cuts through the great bend of the Rocky Mountains, and flows through a canon of vast proportions and sublimity. It is narrow, deep and very swift, but gradually widens, and in its broadest extent is studded with little islands. The scenery along its course is wild and picturesque. Its banks are hilly and clothed with dense forests, in which moose, deer and other large game may be found in great numbers.

The water of the Yukon above the mouth of the White River is clear and dark; the color of the latter stream is much lighter, and for a very long distance these currents flow side by side without mixing, but finally unite, and the Yukon as it approaches the sea becomes very dark. The river is navigable.

The second largest river of Alaska is the Stikine, which has become better known than any other, from the gold diggings on its banks; these are all situated in British Territory.

It is about 350 or 400 miles long, and navigable for small steamers to Glenora, 150 miles, flowing first in a general westerly direction, through grassy, undulating plains, darkened here and there with patches of evergreens, then curving southward, and receiving numerous tributaries from the north, it enters the Coast Range and sweeps across it to the sea, through a Yosemite Valley, more than a thousand miles long, and from one to three miles wide at the bottom, and from five thousand to eight thousand feet deep, marvelously beautiful and inspiring from end to end. To the appreciative tourist, sail-

SUMMER ON THE YUKON RIVER, ALASKA.



ing up the river through the midst of it all, the canon for a distance of over a hundred miles, is a gallery of sublime pictures, an unbroken series of majestic mountains, glaciers, falls, cascades, forests, groves, flowery garden spots, grassy meadows in endless variety of form and composition—furniture enough for a dozen Yosemites—while back of the walls, and thousands of feet above them, innumerable peaks and spires and domes of ice and snow, tower grandly to the sky.

About fifteen miles above the mouth of the river, you come to the first of the great glaciers, pouring down through the forests in a shattered ice cascade, nearly to the level of the river. Here the canon is about two miles wide, planted with cottonwoods along the banks of the river, and spruce and fir and patches of wild rose and raspberry extend back to the grand Yosemite walls. Twelve miles above this point, a magnificent view is opened along the Skoot River Canon—a group of glacier-laden Alps from 10,000 to 12,000 feet high, the source of the largest tributary of the Stikine.

Thirty-five miles above the mouth of the river, the most striking object of all comes in sight. This is the lower expanded portion of the great glacier, measuring about six miles around, the snout pushed boldly forward into the middle of the valley among the trees, while its sources are mostly hidden. It takes its rise in the heart of the range, some thirty or forty miles away. Compared with this, the Swiss *mer de glace* is quite insignificant. It is called the "Ice Mountain," and seems to have been regarded as a motionless mass, created on the spot, like the



rocks and trees about, without a question as to how or when. The front of the snout is about three hundred feet high, but rises rapidly back for a few miles to a height of about a thousand feet. Seen through gaps in the trees growing on one of its terminal moraines, as one sails slowly against the current, the marvelous beauty of the chasms and clustered pinnacles presents a scene of wondrous beauty as the sunshine glitters upon it.

The high mountains of Alaska are all south of latitude sixty-five. The St. Elias, or Coast Range, contains the highest peaks and most of the volcanoes of the Territory. This great mountain chain extends along the northwest coast, from California to the peninsular of Alaska. In longitude 142 west, it merges with the ranges, which join it from the north and east, forming the Alaskan Range.

Alaska may be considered agriculturally as three districts, each differing from the others in its climate, vegetation and physical characteristics. The first and most northern of these divisions, which may be designated as the Yukon country, is bounded on the north and west by the Arctic Ocean and Behring Sea, on the east by the British boundary line, and on the south by the Alaskan Mountains.

The second, or middle division, which may be termed the Aleutian district, includes that part of the peninsular of Alaska, and all the islands west of the 155th degree of longitude.

The third, or southernmost, which may be called the Sitkan district, includes all our possessions on the main land, and islands, south and east of the peninsular of Alaska.

The character of the country in the vicinity of the Yukon River, varies from low, rolling and somewhat rocky hills, usually easy of ascent, to broad and rather marshy plains, extending for miles on either side of the river, especially near the mouth. Of course, there are no roads, except an occasional trail, hardly noticeable except to a voyageur. The Yukon and its tributaries form the great highways of the country. The soil is usually frozen at a depth of three or four feet in ordinary situations. In colder localities, it is frozen to within a foot or two of the surface. This layer of frozen soil is from six to eight feet thick; below that depth there is no ice, except in greatly exposed localities.

"In places, where the soil is well drained, and not covered with moss, as in the large alluvial deposits near the mouth of the Yukon, I have noticed," says the writer quoted, "that the frozen layer is much further below the surface, and in many places appears even to be entirely wanting. I have no doubt that in favorable situations, by draining and deep ploughing, the ice could, in the course of time, be wholly removed from the soil."

The lesson, we may learn from this curious formation, is that a healthy and luxuriant vegetation may exist in the immediate vicinity of permanent ice,—a lesson taught also by the luxuriant trees and hardy vegetation, even up to and above the snow line on the Sierra Nevadas in California, and everywhere upon the Rocky Mountains. So in Alaska, in the vicinity of permanent ice, vegetation flourishes, bears its blossoms and matures its seeds, as readily as in situations apparently more highly favored.

The climate of the Yukon country in the interior—and so, throughout Alaska—differs from that of the sea coast. That of the coast is tempered by the waters of the Behring Sea, and many southern currents bringing warmer water from the Pacific, thus giving to the winter on the coast, a far greater degree of mildness than in the far interior, or even thirty miles away from the ocean; this too, without any high mountain range acting as a bar to the progress of warm winds. On the other hand, the summers are cooler and less pleasant than those of the interior, owing to the quantity of rain and cloudy weather. The months of May, June and a part of July are delightful, being warm and clear with almost perpetual sunshine. A luxuriant growth of herbage springs up almost as soon as the snow has disappeared, and the spots which a few days before presented only a mantle of snow, are teeming with thrifty vegetation, producing leaves, flowers and fruits in rapid succession.

Even during the long Arctic day, the plants have their period of sleep, short, though as plainly marked as in the tropics, and indicated by precisely the same phenomena—the drooping of the leaves and other conditions noticeable in milder climates.

The real opportunity for agricultural enterprise in any region, cannot be deduced from the annual mean temperature alone, but it is dependent upon the heat of the summer months, and the duration of the summer.

“At Fort Yukon” says Dall, “I have seen the thermometer at noon, not in the direct rays of the sun, standing at 112 degrees, and I was informed by

the commander of the post, that several spirit thermometers graduated up to 120 degrees, had burst under the scorching sun of the Arctic midsummer; which can only be thoroughly appreciated by one who has endured it. In midsummer, on the upper Yukon, the only relief from the intense heat under which the vegetation attains an almost tropical luxuriance, is the brief space during which the sun hovers over the northern horizon, and the voyageur in his canoe blesses the transient coolness of the midnight air."

The valley of the Lower Yukon is somewhat foggy in the latter part of the summer; but as we ascend the river, the climate improves, and the short summer at Fort Yukon is dry, hot and pleasant, varied only by an occasional shower of rain. The Yukon country is abundantly supplied with timber; even the coasts of the Arctic Ocean are strewn with trees brought down by the Yukon. The white spruce is the largest and the most valuable tree growing in this region. The beautiful conifer is found all over the country, a short distance inland, but the largest and most thrifty of these trees are found in the vicinity of running water. It often grows to the height of from fifty to a hundred feet, with a diameter of over three feet; but the usual size is not much over half these dimensions. The wood is white, close and straight grained, easily worked, light, yet very tough—even more so than the Oregon pine. It is not large enough for masts of vessels, but is superior to any other tree for spars. Near Fort Yukon, the trees are smaller but large enough for most purposes.



The birch is next in importance. It grows to the height of about forty feet, with a diameter of a foot and a-half. Several species of poplar abound. One variety attains the height of from forty to sixty feet, having a diameter of three feet. Willows and alders are the most abundant of Alaskan trees. Of the former, all sizes may be found, from the slender variety on the Lower Yukon, which grows seventy or eighty feet high, yet only six inches in diameter, and with a mere wisp of straggling branches at the extreme tip, to the dwarf willows of the Arctic coast, crawling under the moss with a stem not larger than your pencil, and sending up shoots only a few inches in height.

In Spring time, the treeless coasts, as well as the low lands, fairly glitter with a profusion of flowers amid luxuriant growth of verdure.

The greater number of clear and pleasant days occur in January, February and June, and usually follow a north wind.

“It may not be irrelevant to make a comparison between this portion of Alaska and a very similar country, which has, however, been for centuries under cultivation. I refer to the Highlands of Scotland and the adjacent islands, whose Scotch mists have become proverbial. Dr. Graham of Aberfoyle, referring to the western district of Scotland, says that Ayreshire is very moist and damp, with a mild and temperate climate. Renfrewshire is visited with frequent and heavy rains. Dunbartonshire has the same character. Argyllshire is considered the most rainy county of Scotland.

The vapors of the Ocean are attracted by its lofty

mountains, and the clouds discharge themselves in torrents on the valleys. The winters are for the most part, mild and temperate, but the summers are frequently rainy and cold.

This description would answer very well for the most rainy portions of Alaska.

Indeed, even in Iceland, where the temperature in winter is sometimes thirty-five below zero, we learn from Sir George MacKenzie, that four-fifths of the entire population of seventy thousand, derive their maintenance from agriculture.

The aborigines of North America are naturally divided into two great groups, one comprising the natives known under the name of Indians, the other, comprising the tribes of Innuits, Aleutians and Asiatic Eskimos, adopting the nomenclature of Dall are *Orarians*—dwellers upon the sea-coasts. Gen. Brisbin, in supporting the theory that the Indians are of Asiatic origin, says:—

“Perhaps, the strongest proof that our Indians are from Asia, is in the fact that the nomadic tribes of Alaska, are related to the Kamschatkans, and even now pass and repass Behring Straits. A tribe has lately been found in Alaska, speaking the Kam-schatka; and still further, as if to remove all obstacles to the belief that the North American Indian is from Asia, I am assured, many tribes on both sides of the straits are identical in manners, habits and customs.

“It can be satisfactorily proved, our Indians are Asiatics, by their similarity of features and complexions; similarity of languages; of religion; of dress and ornaments; of marriages; of methods of



THE YUKON IN WINTER.

THE ALASKA NOTES LAST.

"The wind blows over the Yukon.
My husband hunts the deer on the Koyukum
mountains.
Ahni, Ahni, sleep, little one.
"There is no wood for the fire.
The stone axe is broken, my husband carries
the other.
Where is the sun-warmth? hid in the dam of
the beaver, waiting the spring-time?
Ahni, Ahni, sleep, little one, wake not!

"Where is my own?
Does he lie starved on the hillside? Why
does he linger?
Comes he not soon. I will seek him among
the mountains.
Ahni, Ahni, sleep, little one, sleep.
"The crow has come, laughing.
His beak is red, his eyes gladden, the false one!
"Thanks for a good meal to Kuskokala, the
abnanu.
On the shang, mountain quietly lies your hus-
band.
Ahni, Ahni, sleep little one, wake not!

"Over the mountain slowly staggers the hun-
ter.
Wake, little sleeper, and call to your father!
"He brings you back fat, marrow, and veni-
son fresh from the mountain.
Tired and worn, he has carved a toy of the
deer's horn.
While he was sitting and waiting long for the
deer on the hillside.
Wake, and see the crow, hiding himself from
the arrow!
Wake, little one, wake, for here is your
father!"

making war; of dances; of sacrifices; of funeral rites; of festivals and beliefs concerning dreams; of games; of practice in naming children; of dwellings; and by similarity in form of government."

The winter-houses of the Alaska natives are built on the most exposed localities, that the wind may drive away the snow. Whale ribs are erected in a circle, while turf is piled up around them for two or three feet, and the whole is covered with walrus hide. The latter is oiled, to render it translucent, and therefore no windows are required for the admission of light. These primitive houses are divided into rooms by skins, as the cotton houses of California were divided in the days of '49. Their boats are so constructed that the cargo is kept quite dry, and seal skins are inflated and attached to the gunwale as floats, so that it is almost impossible for the boat to be swamped; with these boats they make long voyages to distant islands. They are generally hospitable, good-humored, but not always trust-worthy.

The natives generally are of light complexion, like all Orarians. They are of medium height, but appear shorter than they are, from their peculiar dress, which if not graceful, admits of the greatest freedom of the wearer. The Aleuts are of light complexion, with coarse black hair and thin features, perhaps from the admixture of Russian blood, are more intelligent and agreeable than of other tribes. In stature they are perhaps above the average height of civilized races. Their form is somewhat stooping and their limbs ill-shaped. The women are shorter, but of greater symmetry and many of them are pleasing in appearance.

CHAPTER XXXIV.

The Great Glaciers of Alaska—The Remains of Extinct Species—The Glaciers sent to Market—The Fur Trade—The Animals Hunted by the Natives—The Modes of Capture—Driving a Flock of Seals, Etc., Etc.



During the glacial period, there existed a different class of animals from those which now inhabit this region. The elephant roamed over the regions of North America and Asia. Later, the reindeer and musk-ox followed the Arctic vegetation, as it extended southward. Then the north-eastern portion of the country, now populous portions of the United States, was covered, as Greenland is at present, with a continuous sheet

of ice. Science has not satisfactorily defined the extent of this glacial covering.

In the valley of the Yukon, the remains of the elephant are everywhere found on the surface, except when buried by the action of the rivers; these remains are completely fossilized, and destitute of animal matter, except in the very interior of the tusks, while the bones of the musk-ox, found in sim-

ilar localities, still retain an animal odor, and sometimes even slight remnants of the sinews.

During the period of most intense cold, large glaciers were formed in the gorges and ravines of the Coast Ranges. As the climate became warmer, they diminished in size, and most of the glaciers in the extreme southern region of the country disappeared entirely. From Bute Inlet to Unimak Pass, almost every deep gorge of considerable size, between the high mountains, for which this coast is so remarkable, has at his head a glacier or the remains of one. Some of these are of wonderful size and grandeur.

The ice, broken from their overhanging cliffs, has given rise to the names "Icy Strait" and "Icy Bay," etc., and lesser fragments, concealed by the adherent mud and rocks, were in numerous instances mistaken by the earlier navigators for permanent rocks.

It is evident that the greater number of glaciers are gradually decreasing in size, and that the climate is becoming drier and warmer. The glaciers of Bute Inlet and the Stikine have receded to a very considerable extent, leaving their tracks unmistakable. The erosive action of the glaciers is comparatively small.

From some of these wonderful formations, issue streams of water, nearly pure, and they do not give rise to any very extensive shoals off the coast.

It is almost a certainty that the whole of the peninsular portion of Alaska, west of the 150th degree of longitude is gradually undergoing elevation. This rise is occasionally accelerated by volcanic action in regions of limited extent.

Remarkable hot and mineral springs are very numerous in Alaska. Gold, silver and copper occur in some parts of the Territory, but probably not in great quantities; amethysts are not uncommon in veins of quartz. Fossil ivory has been found, but it has little if any commercial value. The reports which have been published concerning it are generally the wildest exaggerations. The Russian American Company has long maintained a very profitable trade in ice. At times vessels laden with ice, from several of the glaciers, have found a profitable market southward. The value of ice sent to California in 1868, was \$28,000.

The fur trade of Alaska has for more than a century been widely known. The furs of that region first led to its exploration and settlement, and the history of the trade is the history of the country. Dall gives us some interesting facts concerning the fur bearing animals and the modes of hunting them.

The sea otter is a very large animal; its fur is soft and black, while long hairs tipped with white, add to its beauty. When the skin is properly removed, the pelt is of an oval form.

The fur-seal fishery, formerly less important than that of the sea otter, has of late years far exceeded it in value. The fur-seals and sea-lions are closely allied, forming the family *Otariidæ*. They are well distinguished from the hair-seals (*Phocidæ*) by their external ears and long flippers destitute of hair, and with only three nails. The hair-seals have no external ears, and their flippers are broad, short, and covered with hair, having five nails on the hind

ones. The Alaskan fur-seal formerly extended from the ice line of Behring Sea, to the coast of Lower California.

A number of Aleuts go along the water's edge, and, getting between the animals and the water, shout and wave their sticks. The seals are very timid, and always follow each other like sheep; yet, if brought to bay, they will fight bravely. A man, who should venture into the midst of a herd, would doubtless be torn in pieces, for their teeth, though small, are exceedingly sharp.

A body of four or five hundred having been separated, as above, from the main assembly, they can be driven very slowly, by two men, into the interior of the island, exactly as a shepherd would drive his sheep. Their docility depends on circumstances. If the sun is out, and the grass dry, they cannot be driven at all. If the day is wet, and the grass sufficiently moist, they may be driven several miles. Every two or three minutes, they must be allowed to rest. Those, who become tired, are killed and skinned on the spot, as it is of no use to attempt to drive them then. They would at once attack the driver, and perhaps seriously injure him. When the seals have been brought to a suitable place, they are left with some one to watch them, until it is desired to kill them.

The principal fur-bearing animals, which are not marine in their habits, are the fox, marten, mink, beaver, otter, lynx, black bear, and wolverine. Besides these, the skins of the whistler, marmot, reindeer, mountain sheep and goat, wolf, musk-rat, and ermine, have a certain value, though hardly to be classed as furs.

The foxes are of several varieties. The stone foxes are blue, gray and white; the red fox is found of various colors, known as silver, black, cross, and red foxes. The white stone foxes are the most valuable of the varieties of that species at present. The most common variety is the blue fox. It is of a slate color with a purplish tinge, and very abundant on the Priskyloff and Aleutian Islands. The gray stone foxes are the white ones in their summer dress, and the skins are nearly worthless. Black and silver foxes are abundant in many parts of the Territory.

Otter and lynxes are very common on the Yukon. The wolverine is rare, and its skin, as well as those of the wolf, bring high prices from the natives, who use them for trimming their dresses. A first-rate wolverine skin will bring twenty marten or forty mink skins.

The skin of the black bear is valuable in Russia, although not much esteemed with us.

The sea-lion and the walrus have long furnished hides, oil, and ivory to the inhabitants of Alaska. The quantity of walrus-tusks annually obtained will average one hundred thousand pounds. These animals are most abundant near Port Moller in Bristol Bay, and on the more northern coast and islands.

The sea-lions are abundant on most of the rocky islands. They appear in May, and remain until late in the fall. The males often weigh two or three tons. Their hide and oil are used for the same purpose as those of the walrus, though inferior in quality. The whiskers of the sea-lion are as large as a quill, and sometimes fifteen inches long.

They are exported to China, the Chinese paying a high price for them. The gall is also disposed of in China, being used in the manufacture of silk.

The immense value and extent of the Alaskan fisheries will, doubtless, at an early day be made still greater. Fish have always formed the chief part of the food of the native population.

Many casks of duck and geese were annually salted down by the Russians. They form a very agreeable addition to the winter's fare. The quantity of game of this kind in Northern Alaska is so great, that the time may come when eggs, salted birds, eider and swan's down, may occupy some space in the commerce of Alaska."

What a world of wonders is there, in the vast region between the Mississippi and the Pacific, and our country's northern and southern bounds! The "wonders of the west" are found everywhere throughout this magnificent domain; not only in the grandeur and sublimity of Nature, but in the marvelous achievements of man: of grand old mountains that rear aloft their snow-crowned crests, even to the sky, and in kingly majesty look down upon the lightning and the storm-cloud, far below,—listening to the wild music of rolling thunders, reverberating from cliff and crag and distant peak, standing in stately grandeur, sole monarch of the realm;—to the roar of water-falls, that pour their vast volumes of liquid light and rainbow tints and pearls, down from dizzy heights, to yawning chasms and precipitous canons, of depth so profound they seem to cut the very earth asunder; prairies of

illimitable expanse, that glitter with the wealth of beauteous flowers; meadows clothed with luxuriant verdure, over which range countless herds, both subject, and free from the control of man; silver lakelets with shores of glittering sand, in placid beauty reflecting the sunlight and deep blue of the dome of Nature's temple; gigantic forest trees moss-grown and tendril-twined, that have noted the march of centuries, whose arms are opened wide to welcome the pioneer of progress; beautiful rivers, with banks fringed with trees and flowers,—all these and more are here. Nature's curiosity-shop, her laboratory and her most wondrous works, are open to the inspection of those who choose to make it.

Here, seemingly by magic, spring delightful villages, which quickly grow to populous cities; here, railroads cross mountains and meadows, extend through canons and across broad rivers; and over these the iron steed is dashing onward, startling the fleet antelope, and waking echoes in regions, which, till now, resounded only with the war-whoop of the savage, and the howling of wild beasts; from mines, deep in the earth's bosom, glittering treasure, by millions, is brought to the light of day; golden wheat fields of boundless area; churches, colleges and schools,—all these are here, and thousands of enterprises, achieved or in progress, for the general good.

So rapid the advance of civilization, that he who would seek the "wilds of America," will only find them in Alaska. Immigrants, by hundreds of thousands, every year, are hastening to the West to share the benefits awaiting them. In the East, and over

the sea, 'millions of hands want acres,'—here, 'millions of acres want hands.'

More than half our Territories have now the requisite population for admission to the Union, and within five years ensuing, all of them, doubtless, will have; and new stars of great magnitude will glitter in our country's constellation;—a country upon which the sun never sets.

Our Territory extends through 197 degrees—more than half-way round the globe. When the sun is bidding our western Aleutian isle 'good-night,' he is shedding his rosy beams upon the fields and forests of Maine.

In the growth and prosperity of this country, is illustrated the truth of Bishop Simpson's words:—"Virtue unites, vice scatters, paganism disperses, but Christianity builds up."

What a glorious land is ours! Under a wise governmental policy, America will continue to prosper and brighten with the suns of centuries, till its splendor shall illuminate the world.







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